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Submission

19 December 2022

Committee Secretary
House of Representatives Standing Committee on Agriculture
PO Box 6021
Parliament House
Canberra ACT 2600

Email: Agriculture.reps@aph.gov.au

Dear Sir/ Madam,

Re: Parliament of Australia: Inquiry into food security in Australia (October 2022).

The Queensland Farmers' Federation (QFF) is the united voice of intensive and irrigated agriculture in Queensland. It is a federation that represents the interests of 20 peak state and national agriculture industry organisations and engages in a broad range of economic, social, environmental and regional issues of strategic importance to the productivity, sustainability and growth of the agricultural sector. QFF's mission is to secure a strong and sustainable future for Queensland farmers by representing the common interests of our member organisations:

- CANEGROWERS
- Cotton Australia
- Growcom
- Nursery & Garden Industry Queensland (NGIQ)
- EastAUSmilk (formerly QDO)
- Australian Cane Farmers Association (ACFA)
- Turf Queensland
- Queensland United Egg Producers (QUEP)
- Queensland Chicken Meat Council (QCMC)
- Pork Queensland Inc
- Bundaberg Regional Irrigators Group (BRIG)
- Burdekin River Irrigation Area Irrigators Ltd (BRIA)
- Central Downs Irrigators Ltd (CDIL)
- Fairbairn Irrigation Network Ltd
- Mallawa Irrigation Ltd
- Pioneer Valley Water Cooperative Ltd (PV Water)
- Theodore Water Pty Ltd
- Eton Irrigation Co-operative Ltd
- Lockyer Water Users Forum (LWUF)
- Queensland Oyster Growers Association (QOGA)

QFF welcomes the opportunity to provide comment on the Inquiry into food security in Australia (October 2022). We provide this submission without prejudice to any additional submission from our members or individual farmers.

Introduction

Australia is a net exporter of agricultural products, with numerous uncertainties not only fuelling issues with trade, but also our own domestic market. These uncertainties and disruptions to food security in Australia are underpinned by key inputs such as fuel, fertiliser, labour, supply chain distribution, national production, consumption and export, and relative threats and opportunities of climate change.

Food security, and ensuring food is produced in an environmentally and economically sustainable way, under climate change with the increase of natural disasters, is one of the major factors impacting the agricultural sector, which is not just a challenge for Australia, but is a challenge globally.

Australia's climate and rainfall are both highly variable, however with the increased frequency and intensity of extreme events such as floods and droughts, water is a high demand resource, for which agriculture is reliant upon. Given Australia is predominantly arid to semi-arid, there is a high reliance on water storage and groundwater to sustain not only agriculture, but also communities and industry which increases the demand, reliability, affordability and availability of this finite resource in times of scarcity.

The solutions to achieving food security, will require significant intervention and investment. Addressing the increasing demand from a rising population, scarcity of resources, land use, impacts on crop productivity and greater variation of crop yields, which will be driven by the increased changes in climate variability will all require a stochastic modelling approach to help determine the long-term investment to maintain Australian agricultural production for both the domestic and export market.

What is Food Security?

The 1996 world bank World Food Summit, defined food security by which all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.[1] Under this definition, lies four pillars and must be satisfied simultaneously in order for food security to be realised.

1) Physical availability of food;
2) Economic and physical access to food;
3) Food utilisation (nutrition sensitive agriculture);
4) Stability.[2]

Connecting with food security within Australia is food sovereignty. Food sovereignty focuses on circular economy systems that incorporate the protection, health and resilience of ecosystems to produce food via ecologically sustainable agriculture, through a bottom-up policy driven approach.[3] The current globalization approach of food, exposes Australia's food supply systems to rising prices as world demand increases, thus putting pressure on our domestic market. By increasing the costs of food and production, coupled with the impacts of climate change on the supply system, Australia's population of those that are food insecure are continuing to rise.

As the climate continues to change, the agricultural sector are likely to be affected significantly by the impacts of climate change and the global response to it (Garnaut, 2010, p9).[4] This incorporates a variety of factors, including both economic and population growth, that need to be considered, along with

[1] What is Food Security? There are Four Dimensions (worldbank.org)
[2] What is Food Security? There are Four Dimensions (worldbank.org)
[3] Food Security in Australia: Challenges and Prospects for the Future, edited by Quentin Farmar-Bowers, Vaughan Higgins, Joanne Millar; Springer Science and Business Media, New York, 2013.
[4] Garnaut Climate Change Review; Garnaut, R; Cambridge University Press, 2010.

associated pressures on biodiversity that will also have an impact on food security through increased competition for our natural resources (Lindenmayer *et al.*, 2010).[5]

It is predicted that Australia's population is expected to reach 35 million by 2050,[6] which will exacerbate the rate of change and demand in our food production system, which at this point in time, is a series of factors and events, that will increase the threats to Australia's position as a food secure nation. Land use, social and environmental challenges, available arable land and water, coupled with increased drought and flood events from climate change are likely to threaten Australia's position as a food secure nation.[7]

Australia is currently facing a national health crisis with health systems struggling to keep up with medical requirements across the country. The occurrence of chronic disease is increasing, and governments are responding with investments in more hospitals and health services. Access to fresh, nutritious and affordable food is critical to the future wellbeing of our communities and overall population.

Immediate provisions for the protection of agricultural land, with increased controls and regulation over urban land planning and development; adequate legislation safeguarding productive land from mining and other developments; addressing and implementing a realistic strategy for skilled labour; and increasing agricultural research and development are paramount in ensuring Australia remains both a domestic and export supplier of world class food.

National production, consumption and export of food

Trade and Economics

Australian agriculture is largely unsubsidised, receiving an average level of support of 2.5%, compared to other OECD countries that receive on average 15.1% as at 2020.[8] Australian agriculture, has a strong focus on export, exporting around 72% of the total value of agricultural production. According to the recent changes to agricultural export legislation, there will be a more streamlined approach for the majority of commodities to assist farmers with a more user-friendly export regulation process.[9]

QFF supports a more streamlined approach to trade through export legislation, which provides more options for exports and reduces risk associated with exports concentrated in smaller markets.[10]

Potential impacts on output prices for exported commodities, generally can translate to higher world prices, but it does bring more volatility. Also, higher global prices can impact on domestic prices where there is potential for parity pricing (for products that can be easily exported). These in turn impact on domestic food prices and contribute to inflation, particularly in the aftermath of monetary supply interventions.

Food inflation has detrimental economic and potentially social and health related impacts, as we act in a global market for a majority of our food products, which don't necessarily lead to Australians having a

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[5] Conservation strategies in response to rapid climate change: Australia as a case study; David B. Lindenmayer, Will Steffen, Andrew A. Burbidge, Lesley Hughes, Roger L. Kitching, Warren Musgrave, Mark Stafford Smith, Patricia A. Werner; Biological Conservation 143: 1587-1593; 2010.

[6] Australia to 2050: Future Challenges (treasury.gov.au)

[7] Changes in Australian agriculture and land use: implications for future food security; Millar, J. Roots J. International Journal of Agricultural Sustainability, 10:1, 25-39. 2012.

[8] Brown, A. De Costa, C. Guo, F. 2020. Our food future: trends and opportunities. ABARES, Research Report 20.1. Canberra; Snapshot of Australian Agriculture 2022 - DAFF

[9] Improved agricultural export legislation - DAFF (agriculture.gov.au)

[10] Improved agricultural export legislation - DAFF (agriculture.gov.au)

lack of food security but leads to cost-of-living issues do to the increase in food prices and instability in overseas markets.

Access to key inputs such as fuel, fertiliser and labour, and their impact on production costs

Workforce shortages

The Australian agricultural sector has undergone significant challenges over the past decade, with pressures significantly increasing since the Pandemic, on the ability to secure a sufficient, competent and reliable workforce. The COVID-19 pandemic resulted in a crippling labour shortage that has impacted all facets of the agricultural workforce sector, especially those directly responsible for the supply of the domestic food market. The insufficient supply of seasonal workers continues to be a critical issue impacting food production, restricting expansion and increasing the strain on growers throughout the production period. These challenges have more recently also been exacerbated by shortages in housing and accommodation, particularly in regional communities.

The reduction in a dependable workforce for the agricultural sector, is, and will continue to have a direct impact on the crop productivity level for our growers, but also have a long-term impact on food security, as current investment on farm is reduced in the short term to ensure profitability and business viability. Long-term investments on farm, which would otherwise contribute to increased production for further seasons, and expand farm practices, have been minimised due to externalities such as workforce shortages.

Crops in some regions are not being harvested, due to workforce restrictions, which is undermining any future economic growth, and putting a strain on regional communities. This is a current and critical issue that has a direct impact on the future of Australia's food security.

Harvest work is often physical, short-term, regionally based, in sometimes extreme climatic conditions, creating a range of barriers for Australians to take up this work. Whilst 80 per cent of the vegetable industry workforce are harvest roles, the other 20 per cent are technical, management and administrative roles. These semi-skilled and skilled roles are in high demand.[11]

To drive future growth in regional communities, and increase the available workforce, Australia needs to encourage and open workforce trade agreements with other countries. Policy must also include the current drivers supporting Australia's unemployed population and provide incentives to help provide a backbone for a skilled, reliable mobile workforce. Providing incentives for the creation of a mobile seasonal workforce would therefore provide labour throughout the varied production regions and seasons when harvesting of crops is required. Public policy change and investment is required to find solutions to alleviate short term accommodation and housing shortages and to ensure adequate, diverse housing stock into the future to support a sustainable workforce for agriculture.

QFF recommends supporting unemployed Australians to reintegrate back into the workforce and supporting the opportunity for older Australians to be incentivised to retire later or work part time during retirement. Unskilled workers could be trained to fill harvest positions, whilst workers with pre-existing skills could be retrained to take on semi-skilled and skilled roles. Programs to reintegrate long term unemployed have been used in some regional areas, with training providers organising transport and not only training them on work skills but also life skills.[12] Support to enable the agricultural sector to build a diverse workforce including the capacity to incorporate potential workers who are currently hindered by barriers to employment, gain work within the sector.

[11] Ausveg, Jobs and skills summit, white paper submission, November 2022.
[12] Ausveg, Jobs and skills summit, white paper submission, November 2022.

A labour shortage will reduce mobility, domestically and internationally causing production and productivity disruption. Workforce planning needs to be prioritised as a critical factor in the inquiry into food security, as farmers not only need to plan ahead for crops, and extreme weather events, but also workforce development, for a reliable, skilled and sufficient workforce.

The resulting factors from an insufficient and unstable workforce is reduced plantings and thus yield, reduced investment on farm to either upgrade or expand current business operations, which then limits the total agricultural productivity output, leading to increased prices of food, fibre and foliage. Workforce constraints can also impact the wellbeing of the sector as additional pressures and stress is placed on farmer owners and managers who are trying to operate business without adequate staff. The result can be excessive fatigue, reduced ability to take on new business opportunities and increase workplace health and safety risks. Increased prices, in an inflationary environment, then contributes to disruption in the export market, which impacts both short term and long-term growth of Australia's Agricultural Sector.

Fuel, fertiliser and chemicals

The sustainability of the agriculture sector is driven by many factors, with input costs such as fuel continuing to rise, putting increasing pressure on farm input costs and creating a cost-price squeeze.[13] Diesel prices over the past few years have hit record prices, in some cases the combined input costs of fuel, fertiliser and chemicals has increased to 150%, representing an average compounding inflation rate of 4.7% p.a. with a 28% increase since 2019.[14] Many of these inputs are sourced from overseas. Most consumers have not yet seen the impact of this as farmers have absorbed many of these price increases, however this is not sustainable.

The continual increase in fuel prices will have an impact on every aspect of production and is compounding the problem of already rising input costs. Farmers are concerned with the price hikes but also concerned with the future security of supply of many key farm inputs. Over the last few years, we have seen a huge increase in the costs of fuel, fertilizers, electricity to name a few with no requisite rise in farmgate prices or retail. Our farmers have been absorbing the bulk of these costs, which is not sustainable and will impact the supply of food into the future if not addressed now.

We need the federal government to work closely with industry to help shore up the supply of fuel and other key inputs, so that farmers have a secure and stable environment to operate in, costs can be contained, and we can continue to do what our farming sector does best in producing high quality, food, fibre and foliage. We also need government to ensure a transparent and level playing field and to discourage market power imbalances occurring due to dominance of large companies who have power through their market power. The ACCC has an important role to play to ensure a fair and equitable operating environment and market for the supply of key inputs.

Input prices, especially fertiliser, being almost totally reliant on imported farm inputs, puts Australian agriculture at risk during disruptive global events. Disruptive global events that impact input prices, are not limited to fuel and fertiliser, but also herbicides, energy and farm machinery. If Australia relies on the overseas import market for inputs such as fertiliser and chemicals, we will continue to see the unstable fluctuation of food production, and continual stress placed on our primary producers.

Having a domestic supply of farm inputs required to drive production, which allow primary producers to plan ahead for the future, will be a necessary mitigation strategy, not only to continue the economic

[13] (Millar & Roots) *in* Beyond 'get big or get out': Female farmers' responses to the cost-price squeeze of Australian agriculture; Newsome, L; Journal of Rural Studies, 79:57-64, 2020.
[14] https://mecardo.com.au/cost-of-farming-up-28-in-3-years/

viability of farm businesses, but also help underpin the support required to retain food security into the future.

QFF supports a renewal of domestic production capacity of farm inputs such as fertiliser, which under the transition to renewables could provide cost effective incentives for fertiliser production if a more stable and affordable energy supply network is achieved. This would also require a public ownership stake in order to reduce the potential of parity pricing to imported products.

Energy and Water

QFF's research, on-farm extension and policy work is helping to inform policies and actions that are changing the way that agriculture uses energy and improving land use management practices so that we can ensure reliability in sourcing energy, decarbonise our sector to meet targets, access more export opportunities and manage our input and operating costs.

Operating costs on farm are currently at risk of high energy costs (network expansion, accelerated renewable energy projects, etc) which will have a direct impact on irrigated food production. Currently many agricultural businesses are heavily reliant on diesel as an energy source, due to the continuing increase of energy prices. Energy is a major input cost on farm, due to a variety of factors, whether it is for cooling of chicken production facilities, refrigeration for horticultural produce, cotton ginning or irrigation, energy forms a major cost component of the agricultural sector.

Unsustainable electricity costs are eroding the viability and productivity of many agriculture businesses and eroding Australia's international competitiveness. An international comparison of Australia's key agricultural trading partners conducted in 2012 showed that Australia's average electricity prices had grown by 40 per cent since 2007. Cost increases for irrigated agriculture have been in excess of 100 % for most and as high as 300 % for others over the same period. Affordable tariffs are a main driver of sustainable business.

QFF advocates for a more sustainable system to remove the burden of high electricity costs on Queensland's food, fibre and foliage producers. This includes supporting sound policy and proven technologies that advance farm-scale renewable energy as part of integrated regional energy supply and demand management solutions, thereby leveraging existing distribution assets; and addressing issues arising from the lack of retail competition.

Lowering costs will enable our primary producers to increase production, which in turn results in higher returns to the economy, ensuring long term stability in regional areas and contribution to maintaining food security. Our farming community contribute significantly to rural development projects and jobs in regional areas, and thus are dependent on long term sustainable energy pricing to maintain economic viability. Installing sustainable pricing will contribute to a stronger economy and see farmers and irrigators continue in business as opposed to reducing farming practices to save costs or seek alternative electricity supply options

Due to the continuing increase in irrigation costs, without reductions in electricity pricing for farmers and irrigators a clear and concise overview of the pricing structure is needed to provide an economical service for producers, enabling them to remain on grid for the long-term sustainability for both users and suppliers of electricity.

Queensland's agricultural sector requires a joined-up and coherent policy approach to address the issues, otherwise Queensland will continue to experience a fast decline across both its electrical and

water infrastructure, risking the future viability of the intensive and irrigated agricultural sector in the state.

Water infrastructure, supply, and costings

QFF recognises the future impacts of climate change and how more useable infrastructure is required to meet demands. It was noted in the 2021 water reform process[15] that some major water infrastructure projects have not demonstrated compliance with the national water initiative (NWI)requirements, nor provided adequate justification on the future economic viability of these developments. The creation of the National Water Grid Authority should remain in order to address the Australian Government funded projects to help with the future of water security in the primary industry. Removing this limitation may reduce funding to be allocated to regions where new water infrastructure is required and increase compliance related issues.

Greater scrutiny needs to be applied to new water infrastructure projects under the National Water Infrastructure Development Fund (NWIDF) for projects that incorporates the projected growth and future use of water for the irrigated sector, which maintains and increases economic viability of rural communities.

Currently, the processes for the development of new water infrastructure are onerous, with government decision making identified as one of the processes that restricts and/ or delays development. As such, investment in new water infrastructure is disconnected between state and federal level, which impacts on the development of projects, causing long delays and in some regions eroding the future viability of agriculture, due to both state and federal governments acting autonomously and not in a unified manner

In many regions within Queensland, combined water and electricity costs for irrigation, is becoming unsustainable, thus leading to lower productivity, and an increase in unused water allocations. Some irrigation users are also unable to trade unallocated water due to the regions in which they are located, high pumping costs to distribute water and the lack of need for surplus water, compounded by a nascent water market. Pricing and compliance although addressed, still recognises greater governance is needed with policy development when some irrigators are paying well in excess of lower bound pricing.

There is still a long way to go for greater transparency in water pricing, which acknowledges the intrinsic relationship between water pricing, productivity and changes in climate that effects irrigators. A more detailed and workable solution for our food, fibre and foliage producers is needed, to help in times of greater climate variability, which also needs to include all avenues of water supply, such as groundwater and associated infrastructure provided by water utility businesses.

Another issue that impedes on food production is the management of water that utilises the same infrastructure to distribute water, which should not have differential pricing applied in respect to crop type. Applying a different pricing methodology dependent on crop type within Queensland undermines the underlying principles of the national water initiative (NWI). Continuously improving on governance arrangements is vital so that issues currently addressed in Queensland (that has differentiated pricing based on agricultural commodity grown), does not see water pricing policies hinder agricultural development.

The lack of drought and flood planning in Queensland can cause inadequacies in water supply, however it is instrumental that climate change adaptation and mitigation strategies are incorporated into all aspects of the water planning process and future water policy framework. Identifying regions more

[15] 20210324-QFF-Submission-to-PC-National-Water-Reform-2020-Productivity-Cmmission-Draft-Report-Feb-2021-WEB.pdf

susceptible to increased drought and floods, will help funding for infrastructure to be focused by a more evidence-based approach that will help mitigate climate change impacts and help manage the future challenges of water security in the agricultural sector.

The water policy framework needs to incorporate climate change challenges and, as such, also acknowledges that policies do not cause adverse impacts for the food, fibre, and foliage sector. Greater alignment between both state and federal governments is needed to allow for not only greater transparency in future funding, but a smoother transition for the delivery of new water infrastructure projects to help support future water security, which underpins food security.

The impact of supply chain distribution on the cost and availability of food

Logistics and freight

There are many variables in farming, but the sector has been innovating for many years to build its capacity to manage risk. A reliable, cost-effective supply chain is critical to the future of agriculture. If we accept that Australia is truck dependent, it's easy to see how fuel increases are going to impact all that are reliant on transport. Every delivery of fertiliser, seed, stock etc will increase. On farm, the costs of operating machinery increases. And, getting produce to retailers and consumer increases too.

Disruptions to the supply chain will have a direct impact on when produce is delivered to its end point, and its final cost. Harvested crops dependent on time sensitive supply chain deliveries can go unsold, which has devastating effects in all areas of the food supply chain. The increased costs for fuel, energy, water, labour can be crippling to small farmers supplying the domestic market. The increased prices in fuel for truck dependent farming operations, has become a large proponent of the input costs on farm that delivers increased prices of food to the end of the supply chain, with in most cases, primary producers not receiving the increased food prices to recover their initial supply chain costs.

The impact from a delayed and / or short supply of fertilisers, chemicals or seed, can also cause major disruptions to the food supply chain and availability of food. A delay in any of the required farm inputs including seed, can impact the supply in the food chain and thus lead to an increase demand and cost on a limited supply.

The same can also occur in extreme weather events where flooding can decimate a year's supply of produce, therefore putting a strain on the domestic market, whilst also trying to supply limited stock to the overseas market, which will see the economic value of produce increase rapidly due to limited availability. Logistics and freight are therefore not the sole disruptors to the supply chain distribution but do compound the impacts on cost and availability in times of natural disasters, including biosecurity threats and high input costs. Workforce shortages contribute directly to transport and logistics capability. Currently, for instance, there is a severe shortage of truck drivers. This is having a direct impact on the ability for truck transport to operate at efficient levels and is seeing delays in moving produce and stock on and off farm. A sustainable pipeline of appropriate workers is important in ensuring a strong transport and logistics sector into the future.

Farm produce requiring processing and packaging is transported via road or rail, and with any instability in the logistics network, can cause vulnerability and disruptions in the food supply chain. This is also relevant for extreme weather events such as flooding and bushfires that limit transport options, and or destroy large volumes of crops, which trigger a decline in food affordability and increase food insecurity for those already vulnerable and in crisis.

The potential opportunities and threats of climate change on food production in Australia.

Opportunities, challenges and solutions

There are various threats, opportunities and challenges of climate change on food production in Australia. Changes in crop grown due to change in climate, decreased yield due to land resource capability, seasonal produce changes due to early/ late flowering (this impacts all aspects of the food supply chain including both the domestic and export market), water availability, floods, drought, and cyclones all contribute to food production outcomes.

Crop productivity, soil water balance, increased climate variability is one of the most significant factors influencing crop production.[16]

QFF suggests the utilisation of climate change modelling through a comparative analysis of climate change impacts on crop productivity using climate, water and crop yield models. This needs to flow onto direct policy that protects both the landholders' interests, but also the future of food security in Australia.

It is predicted that water availability will increase in some parts of the world, which will have its own effect on water use efficiency and water allocation.[17] Crop production has the ability to increase if irrigated areas are expanded or irrigation is intensified, but these also have the potential to increase the rate of environmental degradation. Since climate change impacts on soil water balance will result in changes of soil evaporation and plant transpiration, consequently, the crop growth period may shorten in the future impacting on water productivity.

Crop yields affected by climate change are projected to be different in various areas, in some areas crop yields will increase, and for other areas it will decrease depending on the latitude of the area and irrigation application.

If water availability is reduced in the future, soils of high-water holding capacity will be better to reduce the impact of drought while maintaining crop yield. With the temperature increasing and precipitation fluctuations, water availability and crop production are likely to decrease in the future. If irrigated areas are expanded, the total crop production will increase; however, food and environmental quality may degrade. Water availability, reliability and affordability, will be one of the most limiting constraints for crop production and food security. Climate variability is one of the most significant factors influencing year to year crop production, even in high yield and high-technology agricultural areas.

Ultimately climate variability will see both opportunities and threats, however more funding is required in the area of agricultural research and development to not only ensure Australia's food sector is protected, but also the nutrients required in our soils to help maintain food security. Policy needs to be driven from the grassroots, by utlising climate models, not only for the expected prolonged periods of intense weather events, such as drought, floods and cyclones but how do we maintain the nutrients in our soils throughout these events that underpin the health of all living ecosystems.

Climate variability, impact on key cropping activities (e.g., planting, harvesting) during unseasonal climatic events, and impact of increased frequency of natural disasters (cyclones, floods, droughts) are

[16] Climate change impacts on crop yield, crop water productivity and food security – A review. Yinhong Kang, Shahbaz Khan, Xiaoyi Ma. Progress in Natural Science 19 (2009) 1665–1674.
[17] Climate change impacts on crop yield, crop water productivity and food security – A review. Yinhong Kang, Shahbaz Khan, Xiaoyi Ma. Progress in Natural Science 19 (2009) 1665–1674.

critically impacting on production, supply chains, infrastructure, profitability and sustainability. As can be seen, there are numerous threats on food production in Australia.

As farmers strive to increase their capacity to prepare for extreme weather events and manage as much of their own risk as they can, gaps in the insurance market in relation to flooding and other natural disasters is limiting. Insurance is often so expensive that it is prohibitive or in some instances just not available. This can impact a farmer's ability to manage their own risk and can also have a flow on effect in relation to the bankability of individual enterprises. A new, innovative approach to insurance options is required to assist growers more successfully manage their risk and ability to increase their preparedness for extreme weather events and natural disasters.

The role of agricultural productivity and climate change for food security in Australia is not for continuous discussion. The backbone of our agricultural sector is being stretched to the limits and requires immediate action, before Australia's food insecurity grows and our growth options for food security decreases for all Australian's. Food insecurity in Australia will not be the result of having enough food, it will be the combined result of social, economic and political factors.[18]

Food security is a large risk to Australians as the government emergency infrastructure planning classifies food security as a secondary concern, with many taking food security for granted. Adverse weather conditions such as the increase in flooding and drought events and increases in oil prices all have a flow on effect to the supply chain. There is limited evidence that food security issues, beyond productivity enhancement, are being considered in discussions and policies for climate change and natural disasters. It is understood that a broader view of climate change, beyond disasters and food production, has yet to be fully integrated into food security policy and supply chain governance and practice in Australia.[19]

Maintaining a sustainable and profitable agriculture sector is essential to the longevity and prosperity of farmers and the environment into the future. It is necessary for the federal government to provide clarity around emissions reductions targets and support to achieve them to ensure the state's agriculture sector remains competitive in the global market. Reductions in emissions is an opportunity that the agricultural sector has been contributing to and continue to do, which inevitably contribute to the profitability of their businesses as more on farm renewable energy sources are utilised, reduced soil tillage, changes in farming practices, and changes to animal feed. It is critical that environmental outcomes are linked to productivity increases. To achieve environmental outcomes that ultimately result in reductions in production will essentially place food security and many food supply chains under pressure.

The Australian agricultural sector has been attending to both mitigation and adaptation strategies for many years, as a means of survival without subsidies, or reduction in taxes. It is essential that all farmers have a transparent and equitable environment when it comes to retailers and wholesalers. Transparency, fair trading and contract terms for growers, flexibility in contracts to support growers when they are impacted by extreme weather events or changed production seasons due to weather and other unforeseen circumstances. Contract specifications which reduce food waste and allow customers to access all types of food, not just that which meets strict specifications, which will not only acknowledge the climate change opportunities and threats that are currently being addressed, but also contribute to the longevity of food security in Australia.

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[18] Garnaut Climate Change Review; Garnaut, R; Cambridge University Press, 2010

[19] MacMahon, A., Smith, K. & Lawrence, G. Connecting resilience, food security and climate change: lessons from flooding in Queensland, Australia. *J Environ Stud Sci* **5**, 378–391 (2015). https://doi.org/10.1007/s13412-015-0278-0.

Agricultural exports compete with the domestic produce of other climate ambitious nations, who are implementing emission-intensity legislation and carbon border adjustment mechanisms to ensure a level playing field for imported goods, so their sectors are not unfairly disadvantaged, or their bold carbon reduction targets undermined. It is imperative that the federal government must provide a firm commitment and clarity on emissions reduction targets and commit support to achieve them, otherwise farmers and agribusinesses will be left to do the difficult work, and critically, certify that our products meet the emission intensity criteria of the import country. Efforts in this regard must be meaningful and support a more sustainable, productive and profitable overall food supply chain. Additionally, the Australian Government must contemplate the need for tariffs and bans on imports from countries with even poorer emissions score cards than our own, otherwise our domestic sector's efforts to decarbonise will be compromised.

Biosecurity also plays a major role in food production. Biosecurity will play an even more important role in the area of protection Australia's domestic and export food market. With the global temperature continuing to rise, the incidence of biosecurity threats increases, as pests and disease increase their range of latitude and longitude distribution. The increase range of pests and diseases are due to the attractive climatic conditions, enabling a grater latitudinal and longitudinal distribution. More funding needs to be prioritised for the impacts of climate change on agriculture and the impacts to biosecurity, from the inevitable increase of pests and diseases as the climate continues to warm.

Recommendations Summary

QFF does not support a return to policies that would allow the fragmentation of rural land by the excision of individual small lots in agricultural production areas.

QFF supports the need to encourage and open workforce trade agreements with other countries. Policy must also include the current drivers supporting Australia's unemployed population and provide incentives to help provide a backbone for a skilled, reliable mobile workforce.

QFF proposes that by providing incentives for the creation of a mobile seasonal workforce would help to provide labour throughout the varied production regions and seasons when harvesting of crops is required.

QFF is calling on the federal government to work with industry to find and progress ways to provide farmers with surety and security of supply of fuel and other volatile inputs.

QFF supports a more streamlined approach to trade through export legislation, which provides more options for exports and reduces risk associated with exports concentrated in smaller markets.[20]

QFF supports a renewal of domestic production capacity of farm inputs such as fertiliser, which under the transition to renewables could provide cost effective incentives for fertiliser production if a more stable and affordable energy supply network is achieved.

QFF supports policy that ensures a transparent, fair environment for farmers in relation to retail and wholesale contracts and terms of trade and effective actions through the ACCC to stop anti-competitive behaviour and inappropriate market power being held by large companies due to their market share and dominance.

QFF suggests the utilisation of climate change modelling through a comparative analysis of climate change impacts on crop productivity using climate, water and crop yield models. This needs to flow

[20] Improved agricultural export legislation - DAFF (agriculture.gov.au)

onto direct policy that protects both the landholders' interests, but also the future of food security in Australia.

QFF recommends that more funding needs to be prioritised for impacts of climate change on agriculture and the impacts to biosecurity from the inevitable increase of pests and diseases as the climate continues to warm.

QFF and other peak agricultural organisations contribute in a consultative capacity to the compilation of a comprehensive food security policy.

Utilise a whole of government approach for the development and implementation of policy on the reuse of water from sewage treatment plants as a sustainable option for agricultural water.

Develop a water drought policy that facilitates a long-term strategy incorporating climate change and climate adaptation incentives to continue productivity when drought conditions are enacted by the state while reducing the economic impact on the agricultural sector.

Implement policy that integrates the complex groundwater and soil relationship on farmland and the associated infrastructure required to maintain a healthy water and soil environment.

Summary

Queensland's agricultural sector has some of the highest input costs in the world. The sector also does not receive protections or subsidies as in other countries. While this has led Queensland's farmers to be some of the most efficient and productive in the world, in order to remain internationally competitive in our agricultural exports and maintain the affordability and access to fresh food for all Australian's, these costs must be addressed. Excessive costs and a lack of long-term price certainty in critical inputs, such as water and electricity, is eroding investment and investment confidence.

Parity pricing, fertiliser costs and supply, domestic food prices, fuel, affordable energy, soil health, water availability and reliability, biosecurity, unseasonal climatic events and increase frequency of natural disasters, change in crops, workforce shortages and global supply shortages on the supply chain, are all going to impact the production, availability and supply of food.

QFF suggests that a broader view of climate change, beyond disasters and food production, has yet to be fully integrated into food security policy, and supply chain governance and practice in Australia. As such, it is paramount that QFF and other peak agricultural organisations contribute in a consultative capacity to the compilation of a comprehensive food security policy.

If you have any queries about this submission, please do not hesitate to contact Ms Sharon McIntosh at sharon@qff.org.au.

Yours sincerely

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