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National Committee for Agriculture, Fisheries and Food submission to the House Standing Committee on Agriculture inquiry into food security in Australia

The National Committee for Agriculture, Fisheries and Food welcomes the opportunity to provide a submission to the House of Representatives Standing Committee on Agriculture's inquiry into food security in Australia.

The committee provides the following advice:

- To maintain and improve Australia's food security, the Australian government should develop a coordinated food production and manufacturing strategy and implementation plan to unite food policy, producers, regulatory agencies and research organisations.
- High-quality food and high-quality food information should be made available to all population groups. Adequate access to food is strongly linked to the health of our population and is a matter of equity. Communicating Australia's large food knowledge base and ensuring the translation of food research will improve health outcomes across all populations.
- Agricultural productivity growth has declined dramatically in recent decades, driven in part by a decline in agricultural research investment. Internationally, the current rate of improvement will not meet predicted global food demands. This deficit can be addressed with research investment as part of the food production and manufacturing strategy.

The National Committee for Agriculture, Fisheries and Food is a committee of the Australian Academy of Science which fosters the key scientific disciplines underpinning productive and sustainable agriculture, fisheries, and food industries in Australia.

Food policy and regulation should be consistent and unified to ensure food security

Unification of different policy, regulatory and program areas related to food will ensure that government takes a consistent approach to food and food security. A coordinated national strategy for a resilient food value chain emphasising the link between food and population health will significantly improve food security.

Global food production is facing multiple challenges that will make it hard to increase productivity and may even influence our ability to maintain current levels of production. These challenges include the impact of an increasingly variable climate resulting in declining water availability and land degradation, and pressure to reduce our reliance on fertilizers and other chemical inputs.

As food security develops as a global and domestic challenge, a unified strategy must address an increasing demand for:

- efficiency in food production, processing and distribution to reduce wastage and minimize costs
- research to underpin productivity growth across the food sector, to meet human health needs and to improve food processing
- improved food distribution to ensure our most disadvantaged communities have access to affordable fresh fruit and vegetables. The food distribution problem exacerbates existing inequalities.
- flexible and responsive regulation to ensure rapid delivery of innovations.

These demands act across all parts of the food supply value chain, and therefore must be addressed at a strategic level.

A strong research base supports national and international agriculture but requires investment

Developing a global approach to food security will require addressing the global underinvestment in food production research. A world-wide drop in agricultural productivity growth can be expected to follow from the decline in agricultural research and development (R&D) investment over the past 20 years (Rao, Hurley and

Pardey, 2019). It is internationally recognised that increased R&D investment will boost agricultural productivity (Pardey et al, 2016), and this is the focus of international development efforts towards ensuring food security. This investment is also a key strategy to reduce the impacts of climate change, as well as reduce the greenhouse gas emissions from the agricultural sector (Ortiz-Bobea et al 2021).

Australia is well positioned to assist our neighbours in emerging economies in improving their food and nutrition security. This is an important part of our soft diplomacy work in the region, as exemplified by the Australian Centre for International Agricultural Research (ACIAR). Investing in Australia's research base will allow us to contribute towards global food security solutions, enhancing stability in the region and around the world.

To continue to play this role, there is an urgent need for a well-trained, scientifically literate agricultural workforce. The number of agricultural and food science graduates produced nationally falls far short of the estimated needs, and too few graduates go on to study for higher degrees by research (AAS 2017). The workforce in the agriculture industry has a lower proportion of graduates than is represented in the economy as a whole (ABARES, 2021). Currently there are 6 jobs for every agricultural graduate (Prately et al, 2022). Agriculture also has Australia's oldest workforce (ABARES, 2021). These factors represent a risk to the Australian agriculture sector and to Australia's food security.

The benefits of food research should be provided to the community

For individuals, understanding how food is produced, processed and consumed, along with knowledge of the nutritional composition of different foods, can yield significant health benefits. Food security can only be achieved when people recognise the value of food and the importance of their choices of food.

At the societal level, food is an integral part of the national economy, and our consumption patterns carry a heavy responsibility to consumer health. Issues of nutritional content, affordability and access need to be considered along with economic and environmental factors.

Ultimately, if we can build a community that is well-informed about the food production chain from farm to table and able to make appropriate food choices, we will also have a community interested in ways of improving all stages of the value chain.

To discuss or clarify any aspect of this submission, please contact Dr Stuart Barrow, National Committees Manager, at [REDACTED]

References:

- AAS (2017). Grow. Make. Prosper. The decadal plan for Australian Agricultural Sciences 2017–26. <https://www.science.org.au/files/userfiles/support/reports-and-plans/2017/agricultural-decadal-plan-2017-26.pdf> (Accessed 5 December 2022).
- ABARES (2021). Labour use in Australian agriculture: Analysis of survey results. <https://www.agriculture.gov.au/abares/research-topics/labour> (Accessed 5 December 2022).
- Ortiz-Bobea A, Ault TR, Carrillo CM, Chambers RG, Lobell DB (2021). Anthropogenic climate change has slowed global agricultural productivity growth. *Nature Climate Change* 11: 306-312
- Pardey PG, Chan-Kang, Dehmer SP, Beddow JM (2016). Agricultural R&D is on the move. *Nature*, 537: 301-303
- Prately J, Graham S, Manser H, Gilbert J (2022). The employer of choice or a sector without workforce? Australian Farm Institute. Pp 32-42
- Rao X, Hurley TM and Pardey PG (2019). Are agricultural R&D returns declining and development dependent? *World Development*, 122:27-37