

Thank you for the opportunity to make a submission to the **Inquiry into Food Security in Australia**. I comment from long and senior experience in the sector.

Australia is one of the very few net food exporting nations, yet depending on what's counted, it could only supply some 3% of regional (DFAT definition) consumption. We are not a regional 'breadbasket', but our surplus and domestic security leads us to lean on trade as a driver of much agricultural policy. This is a viable approach while the underpinning resources and innovation are maintained. However, it might be argued that we have not kept pace with our past levels of innovation and investment, or with global developments.

Australia's privileged position compared to general global food security means that threats to our security are more external than internal. Military and other intelligence groups monitor [food and water hotspots](#) in our region as security threats with possible uncontrolled migration. While these matters may be outside the ToR of the Inquiry, they highlight two points; 1) Australia needs a secure and resilient national food system that can cater for rising population, and 2) in the past Australian expertise and innovation that has forestalled food insecurity in our neighbouring region.

The Inquiry's first ToR, **national production, consumption and export of food** relies on a diverse and competent cadre across sectors, some of which are often omitted from reviews related to food or agriculture. Sophisticated technology and understanding its application in local conditions has been a hallmark of Australia's production systems for more than a century. In the scientific and technological fields this is exemplified by the disproportionately high numbers of Australian experts engaged in agricultural innovation around the globe. It has also relied on continually-learning producers that can apply innovations to maintain cost- and environmentally-effective production.

The current situation does not reflect our strengths of the past. No doubt other submissions will discuss farm/production-level constraints – not just lack of labour, but deficiencies in skills and practical training. I wish to focus on the need for a resilient supply chain for sustained innovation, which requires attention to all levels of skills across the sector to catch up and meet current and future needs. [Agricultural education has a proud history](#) in Australia; it has led the world in certain fields. It spans the practical technical skills once imparted via agricultural college certificates, integrated undergraduate degrees of universities, complex doctoral research and higher programs. Research is complemented by State, CSIRO and private staff, the creation of whom is primarily a function of education. The breadth of needs in such education is the fulcrum on which to balance sustained improvements in our national performance.

To service a future continuously-innovative food production sector in Australia will require a revamping of agricultural education. This is not to say that current contributions are not significant; they are, but they are constrained by structures of the past and are poorly appreciated in their traditional institutions. In universities, agricultural science was once a flagship of highly complex integration of the biological, physical, social and economic sciences that provided graduates into the higher levels of research, government policy, complex finance, medicine, regulation and all forms of agribusiness. This is not the case today, for two reasons; 1) universities are driven towards popular subject offerings, and as most universities are urban-based, agriculture is not front-of-mind and its image does not always match institutions' ideals, and 2) the diversity of subject areas required to service food production that could once be contained in a single faculty, school or department of a university is now far beyond containment in a single faculty entity.

A modern innovative food production will be underpinned by discipline areas from most faculties in a comprehensive university. Such a change is almost impossible for a single university to initiate, and there are few incentives to do so. Rather, a coordinated replanning of funding and structuring of its education and associated research is a national issue. I submit that addressing **national food production and export within changing climate** will require, among other initiatives, an empowered high-level review of agricultural and food education that has the objective of renewing leadership in fields of critical importance to Australia's food, trade and border security.