



28 April 2021

Critical Technologies Policy Coordination Office  
Department of the Prime Minister and Cabinet  
PO Box 6500  
CANBERRA ACT 2600  
Via email: [ContactCTPCO@pmc.gov.au](mailto:ContactCTPCO@pmc.gov.au)

To Whom it may concern,

**RE: Critical Technologies Discussion Paper: Agriculture**

The National Farmers' Federation (NFF) welcomes the opportunity to provide a submission to the Critical Technologies Policy Coordination Office Critical Technologies Discussion Paper: Agriculture (the Discussion Paper).

The NFF was established in 1979 as the national peak body representing farmers and the agriculture sector more broadly across Australia. The NFF's membership comprises Australia's major agricultural commodities across the breadth and the length of the supply chain. Operating under a federated structure, individual farmers join their respective state farm organisation and/or national commodity council. These organisations form the NFF.

Harnessing technology is critical for Australian agriculture in order to reach our goal of becoming a \$100 billion industry by 2030. The NFF's 2030 Roadmap Pillar "Unlocking Innovation" identifies the role of disruptive technology and its potential to unlock new waves of agricultural productivity growth.

The NFF commends the Department of Prime Minister and Cabinet and the newly formed Critical Technologies Policy Coordination Office (CTPCO) for conducting this consultation and prioritising agriculture. Understanding current and emerging critical technologies is key to Australia's future prosperity and a first step to ensuring industry, government, researcher, and investor priorities align.

Access to critical technologies is a priority and underpins our agricultural productivity, sustainability and competitiveness, and is a priority for the farm sector. The Australian Farm Institute's collaborative project, *Precision to Decision: Accelerating Precision Agriculture to Decision Agriculture – Enabling Digital Agriculture in Australia* found "if decision agriculture was fully implemented it would deliver an estimated boost to the value of agriculture of 25% (\$20.3 billion) and lift the Australian economy by an estimated 1.5% (\$24.6 billion)." By promoting critical technologies, allowing for full adoption of digital agriculture, the industry will be closer to achieving the goal of \$100 billion in farm gate output by 2030.

We note with interest the eight technology types identified in the Discussion Paper and agree that each of these plays an increasingly critical role in modern agriculture. Feedback from NFF Members indicates that there are a number of other technologies which should also be considered critical by this review. These include:

- **Weather and climate forecasting** – these services are critical to the future success of Agriculture. Farm-level technology to better prepare for and predict weather extremes, including droughts, floods and heatwaves, will better prepare farmers and their livestock and crops for oncoming extreme weather events to aid in preventing losses and maximise yields.
- **Whole of supply chain data analytics** - participants in the agricultural value chain are increasingly exploring technologies that support supply chain collaboration. Such technologies facilitate the free flow of product quality and quantity information throughout the supply chain so that stakeholders are able to make evidence-based decisions for forecasting and planning.
- **Internet of things networks, sensors and robotics** – the use of wireless networks to capture information from sensors is now commonplace in agriculture. Its purposes range from monitoring soil moisture to animal health and wellbeing. Farmers are also using these on-farm networks to remotely control infrastructure and farm operations – for example controlling water pumps or opening and closing gates.

Agricultural cropping industries are already making good use of several critical technologies. However, our livestock industries are perhaps yet to make their strongest gains through the adoption of GPS, supply chain and genetic technologies.

A number of barriers exist which are preventing the full adoption of critical technologies in agriculture. Access to reliable, affordable, quality telecommunications underpin the viability of regional development and farming businesses across Australia. Improving connectivity is vital to the use of critical technologies in agricultural production.

Similarly, farmers are conscious that their increasing data assets must be carefully managed and protected. Industry is taking steps to establish standards for how farm data is managed, secured, shared and stored – including the development of the *Australian Farm Data Code* released in 2020. Consideration of a Consumer Data Right for agriculture may be a next step for industry, increasing our ability to harness data for productivity and traceability.

Agriculture is already on a journey of growth. However, to maximise opportunities in the farm sector, we must fully harness the potential of digital technologies. We welcome the Federal Government's focus on these important issues for our sector and would welcome the chance to continue these discussions as your work continues.

Thank you for the opportunity to provide a submission to this consultation. Should you require any further information, please contact Mike Darby, General Manager Rural Affairs, on 02 6269 5666 on [mdarby@nff.org.au](mailto:mdarby@nff.org.au).

Yours sincerely,



TONY MAHAR  
**Chief Executive Officer**