



Rabobank



**Submission into the Federal inquiry on
Agricultural Innovation in Australia**

Rabobank Australia Ltd.

To the address of:

Committee Secretary
House of Representatives Standing Committee on Agriculture and Industry
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Issued by:

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Dear Minister,

Innovation is critical in order to provide a bridge between global Food & Agribusiness' near-term challenges and longer-term opportunities. Innovation can lead to new ways to profit through the current period of uncertainty and slow growth, while positioning the sector to increase food availability and improve access for future populations.

In addition to the opportunity, the challenge between growth in demand and restraints in resources that is developing will only increase the pressure on agricultural innovation.

Rabobank Australia is part of the international Rabobank Group, the world's leading specialist in food and agribusiness (F&A) banking and finance solutions to businesses involved in all aspects of the food and fibre production and their supply chains.

Rabobank operates in 40 countries, servicing the needs of approximately 8.8 million clients worldwide through a network of more than 1,000 offices and branches. Rabobank Australia is among Australia's leading rural lenders and is a significant provider of business and corporate banking and financial services to that Australian F&A sector.

Rabobank has introduced a *Banking for Food* strategy as a result of our commitment to contribute to global food security and subsequently the prosperity and future of the F&A sector. As a cooperative bank, Rabobank aims to help its clients achieve their ambitions in and for a sustainable society. For that reason, we focus our own contribution to society on accelerating sustainable agriculture and food supply worldwide.

In our *Banking for Food* strategy we identify four main challenges:

- Increasing the availability of Food
- Improve the access to food
- Promoting balanced, healthy nutrition
- Increasing stability.

All of these challenges are important yet for the relevance of this submission we focus largely on increasing the availability and stability of food as we identify this challenge to be furthered most by innovation. To produce 60% more food sustainably, primary producers need to increase yields with fewer inputs: produce more food from stable amounts of arable land, with more efficient use of constrained water resources and fewer fertilisers. At the same time, companies throughout the food supply chain need to significantly reduce food loss, food waste and emissions. So productivity growth and efficiency gains remain critical.

This can be achieved by better leveraging existing knowledge and technologies and stimulating new innovations, be they new and improved technologies, management practices or business models. Innovation is seen at the core of this future and so follows our submission to the Australian Government's Inquiry on Agricultural Innovation.

During the Rabobank F20 Summit held in 2014, industry and government gathered to discuss the critical issues facing agriculture and its role in the global challenge. Innovation was highlighted as an important solution to the achievement of food stability, availability, access and enhanced nutrition.

How to guarantee -sustainably- food security?

Food security concerns us all. The world population is growing, living longer and, on average, becoming more affluent. As a consequence the demand for food is expected to rise by some 60% by 2050. At the same time we are running out of both the natural resources needed to sustain agriculture and options to expand arable land acreage and we need to reduce the ecological footprint of agribusiness. So the food and agri value chain will have to produce more with less, ensuring sustainability of resources and value chains and economic viability for the long term. Food security is a vastly complex issue. To make it somewhat more surveyable, four dimensions of food security have been identified: increasing the availability of food, improving access to food, promoting balanced, healthy nutrition, increasing stability.



9,600,000,000
people in 2050 2015: 7.3 billion

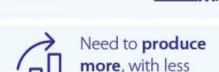
Relevance

Increase Food Availability

The world is growing with **5 millions more mouths** to feed every month



Agricultural land per capita has halved since the 1960's



Improve Access to Food

More than 800 million people are **chronically hungry**

158 new born inhabitants/min. of which 154 from expanding populations in emerging and developing regions

1/3 of globally produced food is **wasted**, due to lack of know-how, improper handling, transportation or storage

Stimulate Balanced Nutrition

Every year over **3,000,000** children die of hunger

More than **1.4 billion** people are overweight, 1/3 of whom are obese

Roughly **one in every six** Americans suffered from a foodborne disease

Enhance Stability

Ongoing spikes in agricultural commodity prices



Value creation throughout the chain is unevenly distributed

Reducing number of farmers

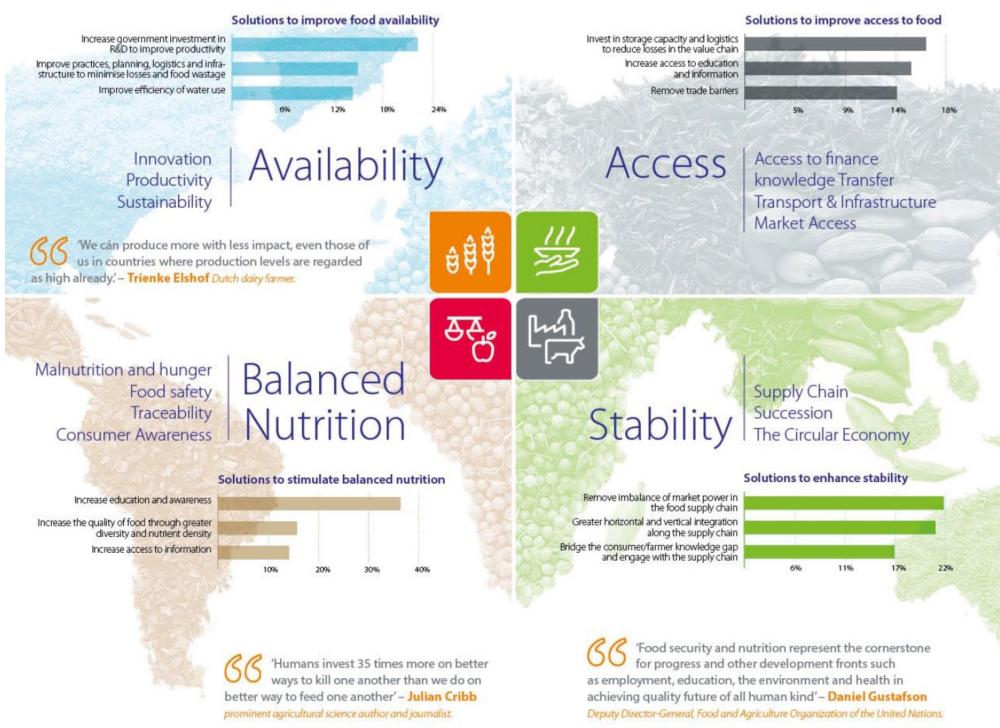
- > Every 20 years the number of people depending on 1 farmer doubles
- > For every 350 people in New York there is only one farmer to produce food

The outcomes of the Rabobank F20 Summit

During the F(Food)20 summit, held on November 2014 in Sydney, about 700 participants from the agricultural and food industries gathered to help set priorities for a sustainable future for the agricultural sector.

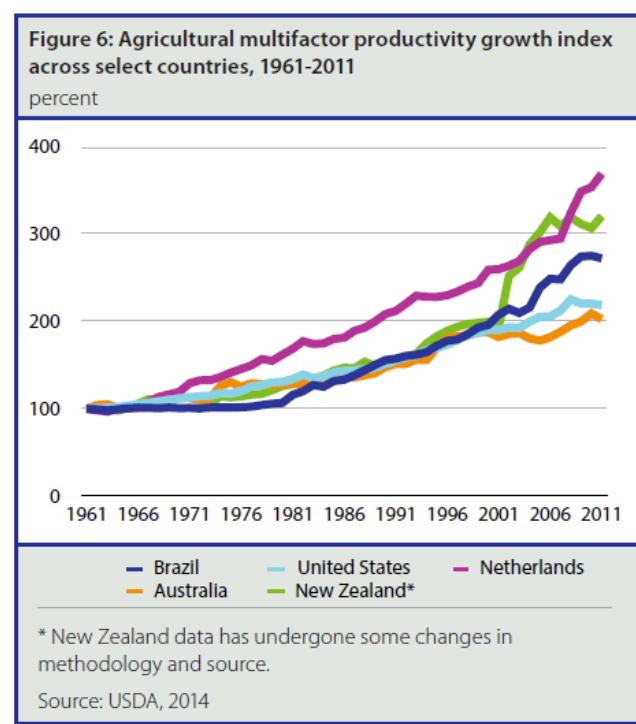
'When it comes to the matter of sustainable food supply, there is no single owner' – **Berry Martin** Member of the Executive Board, Rabobank.

Shifting power - from west to east, north to south - and increasing trade



Increase Food Availability: Increased (government) investment to improve productivity

Agricultural productivity growth in Australia has been slowing in the recent decades. Some competitors have experienced strong productivity gains in recent years, which have brought Australia's competitive position into focus. Brazil - a country with abundant untapped natural resources - has dramatically lifted productivity, particularly since the turn of the millennium, as R&D has grown rapidly and the scale of the industry has expanded. In contrast, the Netherlands - a country with significant resource constraints - has been forced to adopt a sharp focus on innovation and value-adding in order to improve productivity. Australia's challenge will be making the most of any underutilised land and water resources that exist, while driving productivity growth throughout the entire supply chain.



Reversing the slow down in R&D spend

Innovation generated to increase yields and minimise inputs will play a large role in feeding the world sustainably, forging a competitive agricultural sector in Australia and ensuring the profitability and sustainability of participants in the industry.

The importance of R&D and specifically R&D that is targeted to Australian production systems is critical. While collaboration with global partners to harness globally developed innovation is an important factor, so too is adequate research, development and extension specifically targeting local systems and conditions.

A collaborative approach in the Australian cotton sector has seen Australian government, a multinational corporation, and growers collaborate to generate significant gains for the industry. Innovation generated during the past couple of decades have allowed Australian cotton growers to generate the highest yields in the world, using less land, less water per tonne of cotton produced

and less chemicals. The substantial gains have been made both in the adoption of genetically modified seed and in the adoption of data driven farming practices that optimise each input and helps to make more from less.

Providing access to technology

Recent submissions to the regional telecommunications review have highlighted the gaps in download and upload speeds and telecommunication costs between farm and broader Australian averages, effectively suggesting farmers can pay more for less for access to basic internet and phone packages. This gap will provide a barrier to the effective use of many digital farming applications which require connectivity, from GPS to remote alerts, uploading and sharing data in the cloud.

A continued focus on greater and cost effective connectivity will help to encourage the spread and adoption of innovation, particularly digital technology.

Data sharing and collaborative data analysis has the potential to grow the effectiveness of innovation, particularly within digital agriculture. Smart farming technology makes it possible to leverage the best agronomic know how over bigger areas, because the operator of the machine no longer has to be the agronomic expert. Beyond the one farm however the wider reach of the data available the greater the potential value. The willingness to collaborate and share data and information is an important factor to enable greater adoption and benefits of the available technologies.

Digital agriculture and data generation, ownership and use are going to raise concerns and questions that will require regulatory or policy clarity. A clear landscape for the available technologies to operate and position for growth will also be critical.

Access: Increased investment in storage and logistics to prevent losses & Improved access to education and information

Reduction of waste

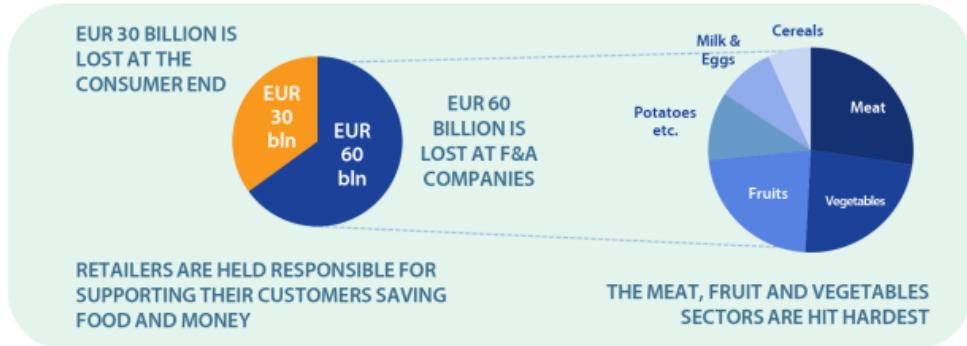
Beyond yield improvement and increased outputs, reducing food losses and waste is becoming increasingly important both to contribute to societal challenges of feeding the world more sustainable but also makes strong commercial sense. Innovation can generate solutions that reduce food waste in different parts of the supply chain.

The sustainable circular economy is a highly promising alternative to the current linear ‘take, make, waste’ model. The circular economy creates value on the basis of ‘reuse, reduce and recycle’. One of the key characteristics of the circular economy is that raw materials and natural resources are not depleted, but are instead recycled efficiently by companies. This transforms a product chain into a circular process. While this development clearly provides attractive opportunities, a company cannot become circular on its own. It must work in alliance with partners inside or outside its own chain. Recently McKinsey estimated the potential economic value of the Circular Economy model in Europe to be around EUR1.8 trillion in 2030. Technologies to convert agricultural waste into bio based products represent a significant opportunity for the industry to improve returns and have a positive effect on the environment.

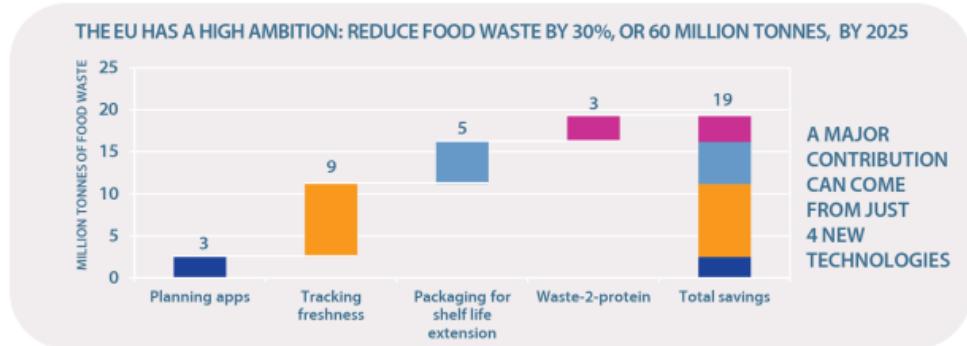
1/3 of globally produced food is wasted



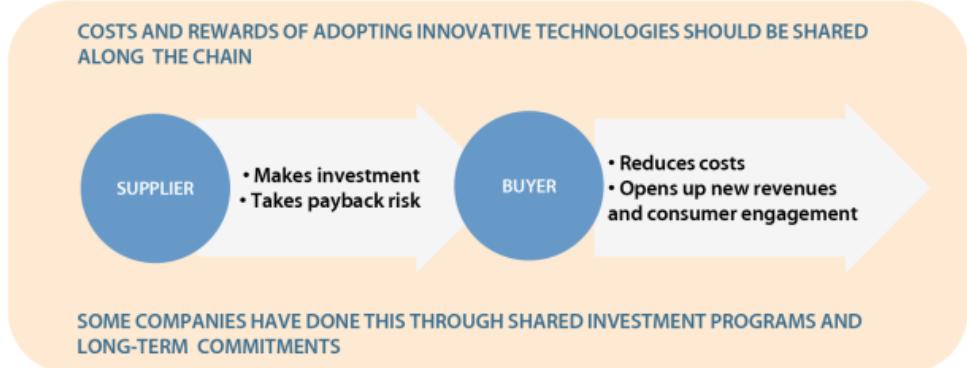
The EU F&A supply chain can reclaim EUR 90 billion



Innovative technologies can lead the way in reducing food waste



Innovative business models are needed to capitalise on technology



Education and information

Education as a key priority for government and is an important tool to increase access to food in addition to growing greater opportunities for attracting new generations and new ideas to the production and distribution of agricultural goods.

New communication streams were highlighted at the f20 as an initiative everyone in the F&A industry should take up in order to better engage with the supply chain and the consumer.

Beyond the opportunities to use newer communication streams, more traditional and practical experiential education programs can also play a big role. Country exchange programs that expose urban youth to rural communities, farming practices and leaders in the rural community can help to increase the access to knowledge about food and fibre production.

Stimulate Enhanced Nutrition: Increase education and awareness regarding nutrition

With the complexity of F&A supply chains growing, and the sourcing of food and raw materials exposed to domestic and international trade, traceability within the supply chain affords F&A companies' retailers and consumers the ability to quickly identify where any problems are and how they can be remedied. Innovation that supports greater traceability and supply chain transparency has the ability to help differentiate Australian produce potentially generating greater opportunity for premiums or access to new markets and reducing the risk of supply chain shocks.

Beyond this greater insight in societal and physiological factors on the prevalence of human diseases will result in further adaptation of foods to specific (individual) genetic characteristics and the life-styles of people at different ages and with various conditions, contributing to preventive health care. Agronomic practices such as breeding for higher concentrations of desired nutrients, targeted application of fertilisers and bio fortification, have been found to enhance food quality to mitigate nutrient deficiencies and improve overall health.

Stability: Remove the imbalance of market power: increased cooperation, bridging the consumer-producer gap

Innovation that can help to **mitigate risks** such as price pressure, cash flow, inventory pressures and external shocks can be assisted through the introduction of new or improved business models.

Moving away from a sole focus on price and building a supply chain that fosters **greater cooperation** and integration can help to 'grow the pie', rather than just dividing it up. Ultimately this leads to better business and socioeconomic outcomes. This strategy and view on innovation is being adopted by some of the world's largest F&A corporations such as Nestle, to enhance the sustainability of their operations.

The better supply chain partners allow information to flow between themselves, the better they understand each other's requirements and produce products that are more tailored to their partners' needs downstream. As this level of understanding improves greater value can be created through the supply chain, with greater productivity realised and greater mitigation of the risks faced by the participants in the sector.

Ultimately, the supply chain offers a great opportunity to help deliver innovation. Providing commercial incentive to cut costs, enter new markets or reduce risk. Clear **communication** and

understanding of the business opportunities, moving away from traditional structures can impact both perceived risk and cash flow.

Continued and **strengthened engagement** from the government together with agribusinesses, R&D providers and industry representatives to identify and work toward prioritised goals will help to drive innovation throughout the supply chain. Greater public and private partnerships to support and encourage models that look to grow and strengthen the supply chain to increase the stability of supply and better use the supply chain as a vehicle for greater innovation.

Encouraging a younger and **broader skills** base into the agricultural sector is a critical enabler of innovation adoption, and more specifically digital agriculture. With an ageing farmer population and fewer agricultural graduates **succession** is a critical issue.

Harnessing the fresh sense of optimism, vibrant thinking and enthusiasm of a new generation can inspire faster and more willing adoption of new and available innovations.

Encouraging those who have been educated in different fields or spent time in different occupations to return to the agricultural sector has the potential to inspire greater adoption and creation of innovation.

Conclusion

Rabobank is of the opinion that the Australian Government can play an essential and valuable role in stimulating the development and the wider uptake of innovation in Australian Agriculture.

Significant economic and environmental outcomes can be achieved by approaching innovation in a holistic way, not only focusing on productivity gains but also management practises, business models, logistical systems and sustainable practices such as recycling waste streams.

In summary Rabobank's key recommendations for this submission are:

- Create an environment and culture in which the development and uptake of innovation is incentivised and the implementation of innovation is helped by swift permit application procedures
- Intensify extension of existing knowledge and technologies into meaningful solutions for end-users
- For data-driven innovation - establish a National Database with a standardised and open data format enabling end-users to benefit directly from collective resources and data sets
- Increase the financial support of education & knowledge institutes in the development and extension of R&D projects
- Develop and promote food & agri innovation as an exciting career opportunity attracting a young and passionate workforce able to drive positive change
- Take a leadership role to develop meaningful Public/Private Partnerships and prioritise to solve the most material issues
- Explore the potential to become the Asia-Pacific Centre of Excellence in F&A innovation attracting international funding and business partnerships
- Significantly improve the telecommunication infrastructure in rural Australia