



Charles Sturt  
University

STANDING COMMITTEE ON  
AGRICULTURE AND WATER  
RESOURCES

# Inquiry into growing Australian agriculture to \$100 billion by 2030

Submission – 14 October 2019

Office of the Vice-Chancellor  
Charles Sturt University



14 October 2019

Mr Rick Wilson MP  
Chair  
Standing Committee on Agriculture and Water Resources  
Parliament House  
Canberra ACT 2600

Dear Mr Wilson,

**INQUIRY INTO GROWING AUSTRALIAN AGRICULTURE TO \$100 BILLION BY 2030**

On behalf of Charles Sturt University, I am pleased to provide this submission to The House of Representatives Standing Committee on Agriculture and Water Resources.

Charles Sturt University is Australia's largest regional university, with more than 43,000 students and approximately 2,000 FTE staff. Established in 1989, the University traces its origins to the formation of the Bathurst Experimental Farm and Wagga Wagga Experimental Farm in the 1890s. In one form or another, research, innovation and education has been integral to the University's character and mission for more than a century.

Charles Sturt University is a unique multi-campus institution with campuses at Albury-Wodonga, Bathurst, Canberra, Dubbo, Goulburn, Manly, Orange, Parramatta, Port Macquarie and Wagga Wagga, as well as various study centres located throughout regional and rural south-eastern Australia. The University's commitment to inclusive, sustainable and prosperous development of regional, rural and remote Australia is informed by our unique research focus and the partnerships we have formed with each campuses' local communities, neighbouring industry, and with the broader regions we serve.

Charles Sturt University welcomes the opportunity to make a submission regarding the opportunities and impediments for the primary production sectors in realizing their ambition to achieve a combined \$100 billion value by 2030.

I would be very pleased to provide further information to the Committee and would be available to provide evidence at any proposed hearings that that Committee may undertake.

Yours sincerely

**Professor Andrew Vann**  
Vice-Chancellor

# Terms of Reference

On Thursday, 22 August 2019, the Minister for Agriculture, Senator the Hon Bridget McKenzie, asked the Committee to inquire into and report on growing Australian agriculture to \$100 billion by 2030.

The Committee will inquire into and report on, the opportunities and impediments to the primary production sectors realising their ambition to achieve a combined \$100 billion value of production by 2030.

# Executive Summary

## Key Points:

- **The National Farmers' Federation has set a goal of growing the value of agricultural production in Australia to \$100 billion by 2030, a goal backed by both the Federal Government and the Opposition.**
- **Two of the key challenges to a \$100 billion agriculture industry by 2030 will be:**
  1. **Producing enough agriculture graduates to facilitate that growth, and**
  2. **Conducting the necessary research and development to produce new technologies and ideas which have been demonstrated to increase the quality and sustainability of farm produce and/or boost productivity.**
- **Charles Sturt University stands ready to make a strong contribution to assist the agriculture sector, governments and regional Australia in producing qualified graduates and quality research and development to ensure the \$100b 2030 target can be reached.**

New, more efficient and sustainable farm technology will require excellent research to convert great ideas and innovations into proven technology that farmers have seen demonstrated, understand and will invest in. Business as usual will not achieve the \$100 billion target for agriculture.

We need to invest heavily in research and development and foster new thinking, innovation and collaboration if we are to reach the \$100 billion target. Charles Sturt University aims to do this through its broad research and innovation agenda, including its AgriSciences and Research Park (AgriPark) and its AgriTech Incubator.

Increasing the value of Australian agriculture does not necessarily mean lifting production volumes. It likely means producing higher quality, sustainable produce which commands a greater return for the grower. Our clean and green sustainable credentials can produce even greater returns if they are built and fostered with technology resulting from solid research.

There is a significant shortage of agriculture graduates in Australia every year, with the number of graduates hovering around 850 a year while the number of advertised job vacancies is nearly 4000.

The 11 years to 2030 will require steep growth in the number of agriculture graduates if the \$100 billion goal is to be achieved, given the agriculture graduate pipeline is four years. This shortage of agriculture graduates needs to be addressed quickly, by investing in producing more agriculture graduates each year. Without significantly and quickly increasing the number of agriculture graduates Australia produces each year, the target of \$100 billion in production by 2030 is highly challenging.

Charles Sturt University produces the largest group of agricultural science graduates in Australia every year and has been proven to have the highest rate of placing students into jobs of all universities in Australia for five years running. The University's footprint also covers a huge area in the Murray-Darling Basin, which is the nation's food bowl and will be key to increasing the value of agriculture.

Existing farms also need to be made as financially sustainable as possible, and we note emerging opportunities for diversifying farmers' income whilst creating drought-proof earnings in the carbon and ecosystem spaces.

Charles Sturt University stands ready to make a strong contribution to assist the agriculture sector, governments and regional Australia in producing qualified graduates and quality research and development to ensure the \$100 billion 2030 target can be reached.

# Recommendations:

1. Government should have as a key consideration that increasing the value of Australia's agriculture sector to \$100 billion by 2030 will likely involve increases in quality and sustainability of product - not necessarily greater volumes.
2. Government needs to invest heavily in agriculture research and development, lifting its investment in this crucial sector to above OECD average, remembering technology is key and we must grow better produce with less water and less input costs in future.
3. Government adopt policies to produce more regionally trained university graduates for the agriculture and horticulture sectors, in order to address the shortage of university-trained agriculture industry employees. This would be done in the knowledge that future agriculture jobs are likely to involve high skill levels, an increased knowledge base, and will embrace technology. Logically, this investment would go to universities with genuine rural credentials recognising these employees are likely to be required in the Murray-Darling Basin.
4. Government seriously examine options to increase the uptake by farmers of sustainable new technologies, including potentially funding low or zero interest loans to encourage farmers to purchase new technologies including those which save water, perhaps from the Future Drought Fund or Regional Investment Corporation. Any subsidisation for technology uptake could recognise the first movers, as has been done with water meters in NSW, where rebates were both prospective and retrospective.

# Introduction and overview of Charles Sturt University

The National Farmers' Federation has set an ambitious but achievable goal of growing agricultural production in Australia to \$100 billion by 2030. This goal has been supported by politicians across the political spectrum, including Agriculture Minister, Senator the Honourable Bridget McKenzie. On Thursday, 22 August 2019, Minister McKenzie asked the House of Representatives Standing Committee on Agriculture and Water Resources to inquire into and report on growing Australian agriculture to \$100 billion by 2030.

Growing agriculture into a \$100 billion industry by 2030 will require focus on many areas. This includes trade deals such as the China - Australia trade deal which has seen improvement in table grape prices for Sunraysia region as but one example. This submission will focus on key areas in which Charles Sturt University will play a direct and key role in helping Australian agriculture achieve its 2030 target. Those areas are building an appropriately trained and educated workforce to grow agriculture sustainably, and research and development resulting in innovation and technology which is taken up by farmers to grow better produce.

Charles Sturt University is Australia's largest regional university, with more than 45,000 students and approximately 2,400 FTE staff. Established in 1989, the University traces its origins to the Bathurst Experimental Farm and Wagga Wagga Experimental Farm in the 1890s. Research, innovation and agriculture have been key parts of Charles Sturt University's mission for more than a century and today, we co-host key agricultural institutions and companies such as AgriFutures, Syngenta and Bridge Hub at our cutting edge AgriPark in Wagga Wagga. The AgriPark is a key plank in Charles Sturt University's vision to support, facilitate and grow Australia's agricultural sector. Further, the University houses the Graham Centre for Agricultural Innovation and the National Wine and Grape Industry Centre. Facilities on the Wagga Wagga campus include the Veterinary Clinical Centre and the \$48.6M National Life Sciences Hub.

There are four large research laboratories including quarantine-approved areas, a phytotron building which houses controlled environment and growth chambers, numerous glasshouses for research and teaching and a world class rhizolysimeter. The School of Computing and Mathematics has world class expertise in data mining, management and visualisation to support the growing need in these areas.

Charles Sturt University has campuses at Albury-Wodonga, Bathurst, Canberra, Dubbo, Goulburn, Manly, Orange, Parramatta, Port Macquarie and Wagga Wagga, as well as various study centres located throughout regional and rural south-eastern Australia, including Melbourne, Sydney, Brisbane and Wangaratta.

For three years running, Charles Sturt University has been named by the [Good Universities Guide as the University which places the highest percentage of its students into jobs](#).

In agriculture fields, Charles Sturt University excelled even above its own standards, with the 2019 percentages of agricultural graduates in undergraduate degrees, post graduate degrees and research qualifications employed in the industry four months after course completion at 86.5, 90.5 and 100 per cent respectively. The University attributes this incredible success to its focus on producing graduates which meet the needs of industry - teaching practical content in practical courses co-designed by industry which include long-term industry placements as a key component. We are proud to be a market-facing university.

Charles Sturt University is recognised internationally for competitive research strengths in agricultural science, horticultural production, food and wine sciences, crop and pasture production, veterinary science, animal production, education, curriculum and pedagogy, environmental science and more.

The AgriPark on the Wagga Wagga campus is the latest proof of our industry focus. The AgriPark will facilitate industry engagement and collaboration, economic growth, wealth creation, employment and skills development. As well as already hosting 70 employees from various agriculture-related organisations including in seed technology, the AgriPark is excited to host Bridge Hub, a company which invests in start-up ideas and technology to make the idea a commercial reality.

The AgriPark also houses the AgriTech Incubator, in which students can do a nine-week course learning about how to refine their idea, pitch it, develop it and make it a commercial reality.

The incubator is the latest in Charles Sturt University's series of successful startups and incubators along with CenWest Innovate Bathurst and the Walan Mayinyngu Indigenous Entrepreneurship Pop Up Hub Program.

The AgriPark and AgriTech Incubator compliment Charles Sturt University's Graham Centre for Agricultural Innovation and the National Wine and Grape Industry Centre, both of which are long term strategic partnerships between Charles Sturt University and the NSW Department of Primary Industries.

Charles Sturt University offers a comprehensive suite of research and academic training programs that focus on addressing rural and regional labour market needs, growing regional economies, and preparing students for the jobs of the new economy through rural and regional Australia. Charles Sturt University is a leading institution in providing higher education opportunities to first-in-family applicants, mature-aged students, as well as those from disadvantaged backgrounds.

Increasing participation of Indigenous Australians in higher education has been a key focus and point of pride for Charles Sturt University. We graduate the highest number of Indigenous students of any university in Australia. We work consistently in collaboration with Indigenous communities across our footprint to ensure access and develop links into the University, and appointed former Aboriginal Health Cooperative Research Centre CEO and Royal Commission into the Detention and Protection of Children in the Northern Territory Co-Commissioner Mick Gooda to our Strategic Advisory Committee.

Research excellence, with a strong commitment to addressing complex regional needs through innovation, has long been at the centre of CSU's mission.

Today, Charles Sturt University continues a 100-year tradition of engagement and leadership with our local communities, of research and innovation in collaboration with industry, expansion in the educational opportunities offered to our diverse student body, and preparing students for employment markets emerging with the evolution of regional and the national economy.

# Workforce

A key challenge as we aim to grow agricultural production to \$100 billion by 2030 is the required increase in educated agriculture employees to make that growth a reality.

The number of job advertisements for agriculture graduates is consistently multiples of the number of agriculture graduates in Australia in any given year. In 2018, the total number of job advertisements requiring an agriculture university graduate was 3653, yet the number of agriculture graduates that year in Australia was around 850. We await the official number as these statistics take more than a year to arrive. (Australian Council of Deans of Agriculture, AG Institute EditionV28). In the four years 2015-18, the number of advertised jobs for agriculture university graduates has risen sharply from in 2,411 in 2015 to 3,076 in 2016, 3,599 in 2017 rising again to 3,653 in 2018 (unpublished data collated by the Australian Council of Deans of Agriculture). The number of jobs advertised for non-management and lower-skilled workers was 1,108, 1,506, 1509 and 1,886 respectively - far fewer than for qualified agriculture graduates.

Further making the point, the [ABARES 2018 workforce report released in October 2019](#) found “*Higher skilled vacancies were more difficult to fill*” and that as farms grew larger, those farms became “*less reliant on family (workers) and more reliant on workers with technical skills*”.

*“This highlights the importance of access to agricultural training to ensure Australians gain the skills and experience necessary to meet labour demand.”*

In March 2019, [National Farmers' Federation CEO Tony Mahar](#), said “*solving agriculture’s worker deficit was paramount to agriculture achieving a farm gate output value of \$100 billion by 2030*”.

The [Federal Government has aimed to address the shortage in lower-skilled labour](#), including through changes to visa arrangements to help farmers access more traveller labour.

It is clear we need more agriculture graduates, particularly from and in the Murray-Darling Basin, which will be key to growing production and achieving the \$100 billion target. Charles Sturt University produces more graduates who stay in regional Australia - 80 per cent of on campus students and 75 per cent of online students - which proves the philosophy that to further skill the regional workforce requires educating people in the regions. Further, we are now educating more women than men across the agriculture disciplines, with the 2018 enrolment number 739 women and 677 men.

Charles Sturt University is uniquely placed to help address the shortage of high-skilled agricultural workers in Australia. In 2019, the percentages of agricultural graduates from Charles Sturt University in undergraduate degrees, post graduate degrees and research qualifications employed in the industry four months after course completion were 86.5, 90.5 and 100 per cent respectively. Placement of agricultural graduates into jobs is typically more than 10 percentage points higher than for other industries.

Charles Sturt University is [consistently ranked as the institution with the highest graduate employment rate in Australia with 84 per cent of graduates fully employed within four months of graduation](#) compared to the national average of 69.5 per cent. In 2018, Charles Sturt University was Australia’s best for Full-Time Employment in Agriculture and environmental studies, as well as law, psychology and other fields. Our graduates earn the highest starting salary in NSW (\$62,000) and in 2018-19 we were rated 5 stars for full time employment, median salary, learner engagement and – significantly – first generation in family to attend university, by the Good Universities Guide.

Charles Sturt University provides the largest cohort of Agricultural Science graduates in Australia and the only degree course in Horticulture. Charles Sturt University’s schools of Animal and Veterinary Sciences and Agricultural and Wine Science combined with the Institute for Land, Water and Society provide ideal opportunities to teach and mentor the leaders of tomorrow as well provide partnership and collaboration opportunities for innovative cross-discipline research. The AgriPark on the Wagga Wagga campus facilitates industry engagement and collaboration, economic growth, wealth creation, employment and skills development. The AgriPark also houses the Agricultural Technology Incubator.



The AgriPark and AgriTech Incubator compliment Charles Sturt University's Graham Centre for Agricultural Innovation and the National Wine and Grape Industry Centre, both of which are long term strategic partnerships between Charles Sturt University and the NSW Department of Primary Industries.

With our many award-winning agriculture courses, our keen focus on working with industry to meet its needs, our well trained and thoughtful graduates who already have good experience working in businesses, on our experimental farms and at our AgriPark at Wagga Wagga, we can work with Government to help address this shortage and increasing demand for agriculture graduates which will be essential in meeting the 2030 target.

Part of the answer to workforce shortages will be technology and mechanisation, which itself creates interesting and fulfilling jobs for trained and educated applicants, and in turn makes choosing a future in agriculture more attractive. In the US, the California Farm Bureau Federation survey released in April 2019 showed farmers have turned to mechanisation citing workforce shortage as the key reason <https://www.cfbf.com/wp-content/uploads/2019/06/LaborScarcity.pdf> , with more than 31 per cent of farmers having adopted mechanisation due to the labour shortage. California's \$45 billion agriculture industry supplies almost half of America's fresh fruit and vegetables as well as 90 per cent of its tree nuts. The California survey finds 40 per cent of Californian farmers at some point in the past five years have not been able to access enough labour to harvest their main crop and also reports high rates of hiring undocumented workers.

The University of Adelaide's report "[Towards a durable future: Tackling labour shortages in Australia's horticulture industry](#)" found 40 per cent of Australian horticulture growers surveyed had not been able to hire enough labour to harvest their main crop at some point in the past five years and many had also hired undocumented workers. It also found:

*"Mechanisation has the potential to improve the horticulture industry's international competitiveness and create opportunities for higher-skilled jobs to manage new technology."*

This is an area in which Charles Sturt University's research could aid farmers - by helping innovate and create new technologies which can aid farmers to overcome these types of challenges.

The same report concludes there should be a national, long-term strategy for horticulture labour supply:

*"...which encompasses concerted investment in mechanisation to develop greater productivity and opportunities for the development of a local, skilled horticulture workforce... This comes with multiple benefits to growers including diverting competition away from the cost of labour to more productive points of difference such as product quality and technological innovation, improving the reputation of the industry, which will be crucial when competing in international export markets, and increasing cooperation between growers and other stakeholders in relation to labour supply and production."*

Charles Sturt University stands ready to work with governments, growers, businesses and all stakeholders to deliver the agriculture graduates we need, as we all strive to achieve a \$100 billion agricultural industry by 2030.

# Research and Development

Farming technologies have changed immeasurably in the past 50 years and will change more in the next decade than at any previous time in history. For example, many farmers have moved from diverting rivers and drains to flood entire paddocks, known as flood irrigation, to drip irrigation delivered by small hoses running to each tree, controlled remotely and often by via mobile phone. Livestock farmers can use new mapping which allows them to compare grazing and grass growth on every section of their properties to see which areas are most productive and why. Tractors are guided by Global Positioning Systems as they plough and plant, and water can be tracked by satellite as it moves down rivers.

New, more efficient and sustainable farm technology which value adds to our produce will be vital to achieve the 2030 target, and will require excellent research to convert great ideas and innovations into proven technology farmers have seen demonstrated, understand and will invest in. We need to boldly embrace risk and failure. Business as usual will not achieve the \$100 billion target. A recent Charles Sturt University trip to Israel noted investors there will often not invest in a start-up unless the owner has previously failed at least once, recognising the value of determination and of learning from failure, in a stunning contrast to attitudes towards failure here in Australia.

Australian agricultural start-ups are more likely to fail in comparison to those in other countries as Australian farmers have not traditionally taken up technology readily, and so local start-ups often need to focus on the global market. This is backed by various research including that on mixed farming systems by [Meat and Livestock Australia](#), which has found the mixed farming sector in southern Australia would profit an extra \$2.8 billion annually if the middle 60 per cent of farmers improved their production practices to match the level of the top 20 per cent of farmers.

The issue of low take up of technology and new thinking by farmers needs to be addressed. Firstly, we need to invest in research to help create technology, and to make great ideas a commercial reality. Secondly, we need to invest in demonstrating their use clearly to farmers. Market analysis and surveys have repeatedly highlighted farmers take up new technology at far greater rates when the new technology has been demonstrated to them and shown to work. Field research and showcasing new technology is key in encouraging farmers to adopt it. Delivering new ideas and technology to market, demonstrating it and getting farmers to take up new ideas and technology is a key part of the 2030 challenge.

It should be noted however that generational change is upon us in the agriculture sector. As a younger generation take over the running of farms, they are much more likely to take up technology and new ways of thinking, and will be much more educated than their predecessors. We note the Federal Government has moved to assist young people to buy or take over their first farm.

The Council of RDCs and the Food and Agribusiness Growth Centre have been considering the vision and strategy for the future of Australian Food and Agribusiness. Late in 2018, the Council of Rural RDCs released a Vision 2050 document which articulated the major trends affecting the industry and the challenges and opportunities it is facing:

<http://www.ruralrdc.com.au/wp-content/uploads/2018/12/Vision-2050-Paper-December-2018.pdf>

Existing approaches to encouraging collaboration and R&D in Australia have tended to be focussed around the needs and interests of existing interest groups and players rather than necessarily being visionary about the future of the whole industry. They have also tended to separate research and innovation initiatives from training and education initiatives. We have therefore had too conservative and partial an approach to both research and education. There is a need to look at growing practices, soil health, water usage, circular agriculture and digital and spatial technology to set targets for 2050 and ensure that we achieve the highest value products which are competitive in the global market. This is work is being progressed through the Food and Agribusiness Growth Centre and led by Dr Michele Allan.

There is real opportunity to take a more consistent and coherent approach which would allow more substantial and strategic change and think about the interests of Australia as a whole. It would also set the basis for building the skills and knowledge basis for jobs of the future in rural and regional

Agribusiness. This would make much more use of rural and regional infrastructure - particularly that operated by regionally based universities - to facilitate better collaboration between all players and hence support the Australian Food and Agribusiness industry to achieve major change. One of the key issues is the lack of an inventory of existing capacities and strengths amongst higher education and research providers. This makes it hard to assess overall capability and where investment should be targeted. The RUN group of universities have an opportunity to take a lead in this space and help to shape this agenda.

There does not appear to be high level strategic thinking reaching across the different commodity research organisations in Australia to conceive big-thinking projects with cross-industry benefit, for instance research around water efficiency and reduced herbicide use.

With appropriate research, reducing herbicide use could potentially be an opportunity to value-add and create a point of difference for Australian produce. For example, there are opportunities to grow new weed killers and suppressors using the natural excretions from plants which aim to kill their nearby competition - effectively genuinely natural, non-chemical weed suppressors. Some of these plant excretions have been identified but have not been researched enough to progress towards commercial venture stage. This kind of sustainable value-add to a farmer's product has the potential to make the product more desirable and increase what the market will pay for their produce, both here in Australia and overseas, including Britain, the EU, the US.

Government providing incentives to encourage farmers to take up new technology is supported. However Government needs to recognise first movers, as is did with the NSW metering subsidy, which was retrospective as well as prospective.

Increasing income from diversification on farm will contribute to the target of \$100 billion. There are opportunities for farmers to receive income from sections of their properties which do not currently produce traditional agricultural commodities, for example from carbon credits and ecosystem services. Both these markets have been functioning overseas for some years and have the potential to diversify farm offerings with drought proof income. The extra, drought proof income from ventures such as these could provide extra capital which farmers could use to become more productive.

Agriculture cannot exist without water, and rainfall averages this century are far less than what they were last century. Government should further investigate options such as recycled water both for domestic use in cities and agricultural use, both from domestic sources and industrial sources such as the mining industry. Australia is the driest inhabited continent on earth and is surrounded by water. Given this, Governments should do the necessary research to assess the feasibility of desalination plants to supply coastal cities, preferably powered by green energy. Regional rainfall should not be piped to coastal areas. If feasible, some desalination water could be piped inland.

Charles Sturt has demonstrated its commitment to research, innovation, new thinking and collaboration as it strives to help achieve the 2030 goal.

Charles Sturt University runs courses in Agriculture, Agricultural Science, Agricultural Business Management, Horticulture, Viticulture, Wine Science, Wine Business, Sustainable Agriculture, Veterinary Biology, Veterinary Technology, Animal Science, Equine Science, Environmental Science and many more. Charles Sturt University also houses an AgriPark, an AgriTech Incubator, the Graham Centre for Agricultural Innovation and the National Wine and Grape Industry Centre. Charles Sturt University provides the largest cohort of Agricultural Science graduates in Australia and the only degree course in Horticulture.

Facilities on the Wagga Wagga campus include the Veterinary Clinical Centre and the \$48.6M National Life Sciences Hub. There are four large research laboratories including quarantine-approved areas, a phytotron building which houses controlled environment and growth chambers, numerous glasshouses for research and teaching and a world class rhizolysimeter. The School of Computing and Mathematics has world class expertise in data mining, management and visualisation to support the growing need in these areas.

The Wagga Wagga campus is co-located on the 1,600Ha University farm which is managed as a commercial enterprise with production target based on rainfall. The farm supports precision agriculture technology and runs a 1,600 maternal composite ewe flock and a 400 female Angus Australia benchmarking herd. There are

extensive animal handling facilities, working models of a full range of irrigation systems and an extensive and well-equipped experimental winery.

Charles Sturt University's AgriPark on the Wagga Wagga campus co-locates agricultural businesses with businesses in related industries and government organisations, and with the University, so they can integrate and collaborate. This will help them meet the challenges of growing Australia's agriculture sector to a \$100 billion industry. Already there are 70 employees from a range of state and private organisations housed at the AgriPark, including those from Syngenta, AgriFutures, the Seed Technology Institute, the local Regional Development Australia office, and Bridge Hub, which invests capital into start-up businesses.

The AgriPark will create new businesses, new products and new ways of thinking. The AgriPark and Wagga Wagga will be recognised as a world-leading centre for agricultural innovation, education, extension, research and development and business opportunity.

The AgriPark is led by a Director supported by a Secretariat and an Industry Advisory Panel to ensure the AgriPark is aligned and responsive to industry needs.

[Clusters of businesses in related industries formed around a University substantially improves business outcomes, employment and industry innovation](#) (Jobs for NSW, 2016).

The AgriPark also houses the AgriTech Incubator. The Incubator helps people refine their ideas, understand what they need to achieve to make their product viable, and coach them on how to secure the investment to make the idea a commercial reality. Doing this helps change the mindset around agriculture to realise research can be translated into profitable commercial product. After a nine-week program at the Incubator, students pitch an idea.

The AgriTech incubator at Wagga Wagga is the latest in Charles Sturt University's series of successful startups and incubators with CenWest Innovate Bathurst, and the Walan Mayinygu Indigenous Entrepreneurship Pop Up Hub Program.

As stated earlier, the AgriPark and Incubator compliment Charles Sturt University's Graham Centre for Agricultural Innovation and the National Wine and Grape Industry Centre, both of which are long-term strategic partnerships between Charles Sturt University and the NSW Department of Primary Industries. These two organisations have more than 200 scientists on campus. These Research Centres and Charles Sturt University's Institute for Land Water and Society have all signed AgriPark Partnership agreements. Discipline strengths include farming systems, cereal chemistry and food sciences, weed management and herbicide resistance, veterinary sciences and animal nutrition, biosecurity, social engagement, market analysis, data management and cyber- security.

The [20-Year Economic Vision for Regional NSW](#) recognises the significance of the AgriPark and AgTech Incubator:

*"The AgriPark and AgriTech Incubator at Charles Sturt University represent a major opportunity to facilitate and grow innovation activities in the Agricultural sector in the Region and put the Eastern Riverina at the forefront of agricultural technology".*

The principles which drove Charles Sturt University to create the AgriPark and AgriTech Incubator are aligned with the Federal Department of Industry, Innovation and Science [Statement of Principles for Australian Innovation Precincts](#) released in October 2018.

These principles refer to place based partnerships building on competitive strengths, and especially refers to local leadership, building collaborations integrated into the existing communities and building on local, national and international networks.

Charles Sturt University stands ready to make a strong contribution to assist the agriculture sector, governments and regional Australia in producing qualified graduates and quality research and development to ensure the \$100 billion 2030 target can be reached.