Regional Universities Network

MEDIA RELEASE

10 FEBRUARY 2015

NATIONALS HOST RUN RESEARCH SHOWCASE

Regional Universities Network (RUN) universities showcased areas of unique research such as improved mango production, koala chlamydia vaccines, automated cattle tracking, groundwater engineering and virtual fencing at an event hosted by the Nationals at Parliament House on February 10.

The Chair of RUN, Professor Peter Lee, said regional universities had a strong, vibrant, innovative, connected and growing pure and applied research effort.

“Research undertaken at regional universities provides a unique research perspective embedded in the regional Australian community,” Professor Lee said.

“This event gives us an opportunity, at a time when research funding is being reviewed, to highlight some of the excellent research being undertaken at our universities. RUN universities excel in areas as diverse as geochemistry, forestry sciences, crop and pasture production, agriculture and land management, zoology, biological sciences, mathematics, law, policy and administration, health and clinical sciences and human movement.

“We are using the RUN Regional Futures Australia banner to further our collaboration in research relevant to regional development in areas such as agriculture, environmental security, rural health and well-being.

“RUN universities are strategically growing their research effort to maximise their contribution to research and innovation in regional Australia, including contributing to regional industries and commercial activities,” Professor Lee said.

“Funding investment in research at RUN universities will be highly productive, focussed and yield a high return. Our universities are relatively young and the research effort is increasing significantly. For example, the total research income at RUN universities increase 47 per cent per Full Time Equivalent researcher from 2006 to 2013, compared to the sector average of 35 per cent.”

Federal Member for Cowper Luke Hartsuyker said regional universities were important to communities right across the nation.

“Regional universities make a substantial contribution to regional economies but they also undertake very important research.

“In many cases this research is very relevant to the communities where the campuses are located and can deliver meaningful benefits at the regional level.

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Senator Bridget McKenzie, Chair of the Senate Standing Committee on Education and Employment, welcomed the efforts of the Regional Universities Network.

"The Nationals recognise the great research work undertaken by our regional universities right across Australia and the opportunities they provide to regional students to study closer to home," Ms McKenzie said.

"When students study in regional communities they are more likely to stay and to work in regional communities, creating a stronger regional Australia."

Central Queensland University
CQUniversity Australia is striving to boost the performance of northern Australia's cattle herds. Researchers are using remote monitoring technologies to derive more refined measures of reproductive performance and specifically to better understand calf losses.

With innovations including automated cattle tracking and walk-over-weighing, scientists envision a more automated and streamlined system for monitoring breeder performance. This push towards precision livestock management complements CQUniversity's leadership in agriculture and horticulture, including high-tech fruit sorting, 'value chain' initiatives, carbon smart fertilisers, and aeration of sub-surface drip irrigation for crops.

Vice-Chancellor Professor Scott Bowman says that, in a specific example, handheld spectrometry equipment developed at CQUniversity has seen widespread use in this year's mango harvest, guiding the decision on when to harvest and promoted by the Australian Mango Industry Association.

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Federation University Australia
A major research strength of Federation University Australia is groundwater engineering.

Professor Rae Mackay is an internationally respected groundwater engineer with wide ranging expertise across all facets of hydrogeological investigation and simulation from arid zone agricultural salinity control through urban groundwater pollution assessment to deep burial of nuclear waste. He is the Director of the Geotechnical and Hydrogeological Engineering Research Group (GHERG) at Federation University Australia's Gippsland Campus.

"The Group was established in 2010 and is funded to 2019, largely by the Victorian Government, to undertake fundamental and applied inter-disciplinary research with the brown coal mining industry in the Latrobe Valley, Victoria," Professor Frank Stagnitti, Deputy Vice-Chancellor (Research), said.

"The goal is to reduce mining geotechnical risks to acceptable levels and to address the complex issue of brown coal mine rehabilitation.

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"To achieve this goal, GHERG has established state-of-the-art rock and fluid properties laboratories to investigate a wide range of hydraulic, mechanical and geochemical properties affecting ground movements.

"GHERG employs the latest developments in numerical modelling to develop predictive models of ground behaviour in response to the evolving environmental conditions within the mines using the knowledge acquired from its laboratory and field experimental programs."

New insights have been generated into the long-term behaviour of the geological formations in the Valley that affect the rate of settlement of the land surface and govern the risks of collapse of the mine walls.

Research on rock stress determination, regional groundwater responses to mining, improved slope stability models and the development of stable long-term rehabilitation strategies, form the core of the group's ongoing investigations.

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Southern Cross University
Southern Cross University prides itself on high quality research which has regional relevance, national significance and global impact, solving some of the critical issues of our time. The University strives to improve fundamental knowledge and much of the research is conducted through actively engaging with local communities, industry and government.

"We are concentrating our research in areas where we have high levels of expertise and where we can make a real contribution to both the regions we serve and the global community," Deputy Vice Chancellor (Research) Professor Geraldine Mackenzie said.

The University's research in the areas of Gambling Education and Children and Young People continues to influence policy and our gambling researchers provide services to Australian and state governments, bringing results which inform responsible industry practices.

Geochemistry conducts ground breaking research, building knowledge on the impacts of climate change and ocean acidification, and the management of acid sulphate soils.

"Southern Cross University played a leading role in ensuring the health of the wetlands of the Murray-Darling basin was maintained during the recent widespread drought. We also conduct research in maintaining the health of our estuarine environments and aquacultural systems.

"Our research has global impact. Our plant scientists are working with major crop species as well as rice, coffee, avocado, blueberry and sugarcane, to ensure a sustainable future in food security.

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"Our success in competitive external funding is a real testament to the high quality of research we are undertaking," Professor Mackenzie said.

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University of New England
The University of New England is at the forefront of research into technologies that will improve the profitability, sustainability and productivity of the Australian farming industry.

The UNE Precision Agriculture Research and Development program is using technologies such as unmanned aerial vehicles, sensor networks, remote sensing, pasture monitoring, virtual fencing and the next generation of livestock tags to monitor and control the production of pastures, crops and animals.

These technologies and applications are showcased to students and the community through UNE's new SMART Farm facility, which is integrating science, business and education to drive innovation. The SMART Farm incorporates a state-of-the-art Farm Education and Training building that will enable new research into the development of algorithms and applications to service the needs of farmers of the future.

Professor David Lamb, coordinator of the UNE SMART Farm Project and the UNE Precision Agriculture Research Group, says the UNE Farm is a landscape laboratory for bringing science and technology into the business and lifestyle of farming.

"A research laboratory, an education centre and a community engagement facility, SMART Farm live data streams and embedded sensors offer users access from anywhere in the world," Professor Lamb said.

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University of Southern Queensland
Australian agricultural industries will be the big winners after the USA-based machinery manufacturing company John Deere and the University of Southern Queensland (USQ) teamed up to develop new agricultural technologies.

The focus of the research program is on the development of remote controlled automation and robotics used in custom designed cultivators, tractors, planters and tillers.

The research partnership will benefit growers in Australia and overseas by reducing farm related growing costs.

The work will be managed and directed through USQ's National Centre for Engineering in Agriculture (NCEA) which is a leading innovator in agricultural research.

Grains production and research has also been given a boost with 25 specialist crop growing

researchers taking up new positions at the University.

In conjunction with the State Government's Department of Agriculture, Fisheries and Forestry (DAFF), the scientists will move into USQ's Institute for Agriculture and the Environment (IAgE) to investigate new ways of developing different grain varieties and higher yields for the Northern Australian growing region in support of a national initiative to double crop production by 2040.

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University of the Sunshine Coast
The University of the Sunshine Coast's ground-breaking research into combating chlamydia is set to have significant benefits for preserving Australia's koala populations as well as saving livestock and humans from the disease.

USC's Pro Vice-Chancellor (Research) Professor Roland De Marco said a USC-led world-first successful field trial of a chlamydia vaccine that involved wild koalas last year was a great example of the University's expanding research excellence.

"We're making a concerted effort to build world-class focussed research activities that are of regional, national and international significance - including life sciences, environmental sciences, ecology, zoology, fisheries, forestry, accident prevention and nursing," he said.

"We're currently positioning ourselves to capitalise on the $2 billion Sunshine Coast University Hospital being built nearby that will include specialised research facilities for USC."

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