Barriers to digital agriculture impacting on profit

A recent CSIRO survey across all major agricultural industries found that many Australian farmers are missing out on profit gains available from digital agricultural technologies because of limited availability of on-farm telecommunications to link devices.

Three quarters of digital agricultural technology users reported ongoing problems with the reliability of mobile telecommunications, indicating that poor connectivity across farms is a key barrier to adoption.

Twenty-five percent of all producers surveyed were using on-farm telecommunications to link and analyse data, with usage highest amongst cotton growers (60%) and lowest amongst sheep and wool farmers (18%).

The survey also found that while Australian cotton growers are the biggest adopters of digital agriculture technologies to improve productivity, they are also the least satisfied with current options for connecting and analysing digital information.

The survey suggested that there is currently limited use of farm analytical software platforms in Australia. While 89% of survey participants collect at least one type of farm data, only 19% said they used specialist farm software to manage it.

The survey also revealed that knowledge and trust barriers could impede data sharing in the future, reducing Australia’s ability to make the most of digital farming opportunities and remain competitive in a global market.

“Two-thirds of producers said they knew nothing at all, or very little, about on-farm telecommunications options and nearly half had no plans to install infrastructure in the next five years,” said Mick Keogh, Chair of the Accelerating Precision Agriculture to Decision Agriculture Project (P2D).
“Three quarters of producers were not aware of the terms and conditions in their existing agreements with service providers, which makes them uncomfortable.

“They’re also more willing to share data with other producers than with service providers, because of trust issues around privacy and on-sharing.”

Mr Keogh said the survey results were concerning, given the potential for significant profit gain through the widespread application of digital agricultural practices.

“We’re still pulling together the results of our research overseas about the potential benefits available from digital agricultural technologies, but I think the current forecast of 10 to 15% productivity gains for some Australian industries could be conservative.

“The clear message emerging from this project is that we need to work together - and quickly - to make adoption easier for producers and create a vibrant marketplace for technology providers.

“We’ll be releasing our findings, including recommendations for industry and government and practical tools and outputs for farmers, at the end of the year,” said Mr Keogh.

Dr Emma Jakku, a CSIRO researcher involved in the survey said: “We also need to have the right governance and processes in place and provide tools like plain language information guides, training and support to help producers increase their digital literacy and overcome their concerns.”

“Our agriculture industries are at different stages of adoption making targeted strategies important, but there are a lot of shared challenges that can be more effectively addressed by joining forces.”

The survey canvassed 1000 producers across 17 industries. The full results can be found on the P2D project website - www.farminstitute.org.au/P2Dproject.

The CSIRO survey was funded through the Accelerating Precision Agriculture to Decision Agriculture project (P2D), which is led by the Cotton Research and Development Corporation and jointly funded by the Department of Agriculture and Water Resources Rural R&D For Profit Program and all 15 Rural Development Corporations. It involves research support from three universities, CSIRO Data 61, the Australian Farm Institute and the Data to Decisions CRC.

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