

GPS cows: showcasing and educating high school teachers on agri-tech tools and systems

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There is an increasing disconnect between the agricultural sector and the broader community which in part is attributed to over 90% of the Australian population living in urban areas. It is imperative that educators and students understand this vital industry given the agricultural sector provides food and fibre for the general population and is a key contributor to the economy in Australia. The important role that technology plays across the agricultural supply chain is often unknown. Yet, there is an increasing demand for people with skills and knowledge in digital literacy, STEM (Science, Technology, Engineering and Mathematics) and data analysis to work in the food and fibre sector. The next generation of the agricultural workforce need to be introduced to career opportunities in the agricultural sector and begin developing the necessary skills whilst at school to assist the industry continue to make improvements in productivity and increase adoption of technology. To do this successfully, educators require their own knowledge and skills to be confident teaching and sharing opportunities with their students.

The Agricultural Education, Extension and Communication cluster at CQUniversity has focused on developing opportunities for educators to undertake professional learning in partnership with the New South Wales Department of Education, with aim of improving the knowledge and skills of educators about food and fibre production. Two learning modules have been developed as part of the GPS Cows program; one aimed at Year 7 and 8 students who have often had no exposure to the food and fibre sector, and the second for Year 9 and 10 students who have chosen to study agriculture. The GPS Cows program allows students to collect and analyse their own livestock tracking data from their school farms or utilise an existing dataset if they do not have access to animals. They then learn how to use this data to improve management decisions to increase profitability, productivity and environmental sustainability on-farm. In 2018-19, over 200 teachers undertook the GPS Cows professional learning opportunity across urban and regional NSW. The results in Table 1 demonstrate that teachers believe that the GPS Cows program can assist their students to meet learning outcomes required by the curriculum. However, training and ongoing support is vital to the successful implementation in the classroom.

Table 1. Survey responses of educators after completing the GPS Cows program % (number of responses)

I am satisfied this material will allow students to develop some of the knowledge and understanding of agriculture and food technologies as required by the Stage 4 curriculum	
Strongly agree	36.1% (65)
Agree	56.7% (102)
Neither agree nor disagree	6.7% (12)
Disagree	0.0% (0)
Strongly disagree	0.6% (1)
I am satisfied this material will allow students to develop some of the knowledge and understanding of digital technologies as required by the Stage 4 curriculum	
Strongly agree	42.1% (74)
Agree	53.4% (94)
Neither agree nor disagree	3.4% (6)
Disagree	0.0% (0)
Strongly disagree	1.1 % (2)

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