Career Development in the Australian Cotton Industry: Evidence-based practice supporting the attraction and retention of the next generation of talent

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Biography:

Dr Nicole McDonald is a postdoctoral research fellow supported by the Cotton Research and Development Corporation and to investigate the future workforce requirements for the Australian cotton industry. She is a member of ACCELL (the Australian Collaboratory for Career, Employability, and Learning for Living) and the National Farmers Federation 2030 Leadership team.

Ali Briggs is responsible for developing and implementing Cotton Australia's education program to engage teachers, students and schools in cotton and agriculture. She works with Cotton Australia's field team on regional education programs, develops curriculum-based resources, supports the industry's human capacity initiatives and oversees education events and sponsorship. Ali is based regionally and works across all states of Australia, her background is in both education and training in agriculture, community services and education services.

Trudy Staines has worked at the Australian Cotton Research Institute for 28 years, mainly as a technical officer with CSIRO working on research related to Integrated Pest Management. Trudy has also worked in a role that promotes awareness of the career opportunities in cotton linked to future technology and its application and develops capacity in the cotton industry by inspiring students of all ages to engage through transfer of knowledge and hands on experience.

Australian agriculture is being transformed by digital technologies and trends such as big data, automation and robotics, and artificial intelligence. These innovations are expected to disrupt the workforce and change the skills required for the future of work in the Australian cotton industry. Cotton Australia and the CRDC are focused on attracting and retaining the next generation of talent to ensure the cotton industry has the human capacity to capitalise on the digital agricultural revolution. This presentation will link theory, research, and practical career interventions as they happen in the cotton industry.

Current approaches to promoting careers in the cotton industry include the production of educational resources, teacher professional development programs, work experience placements, and industry scholarships. Evaluations of the efficacy of these interventions demonstrate that a strong focus on increasing the self-efficacy of science and agricultural teachers, and building networks between industry and young people are ensuring the next generation (a) have an accurate understanding of what this sort of work involves, (b) know the broad spectrum of jobs on offer, and (c) are supported to aspire to a great career in the cotton industry.

Results from the "Next Generation Cotton Industry Worker" research project will be discussed. Career theories such as Social Cognitive Career Theory, Self-Determination Theory and the Theory of Work Adjustment are being used to better understand early career experiences in the cotton industry. The findings identify the factors influencing (a) career decisions, (b) persistence, (c) work

adjustment, and (d) the employability and technical skills development of the current crop of next generation workers in the cotton industry. These results will be used to further inform training and career development interventions to make sure the cotton industry workforce is adaptable to the changing nature of work in agriculture.