

Abstract Submission Form

Title (Mr./Mrs/Dr./Prof.)

Dr

Presenting author

Joanna Newton

Institute

Institute/company: Agriculture Victoria

Adress: AgriBio, 5 Ring Road

ZIP/Postal code: 3083

City: Bundoora

Country: Australia

Insert all authors and institutions

J.E. Newton (1,2) and L.C. Monks (3,4)

(1)Agriculture Victoria, Agribio, 5 Ring Road, Bundoora, Victoria 3083, Australia

(2)School of Applied Systems Biology, La Trobe University, Bundoora, Victoria 3083, Australia

(3)DataGene Pty Ltd. 5 Ring Rd, Bundoora Vic 3083

(4)Monks Communication, PO Box 193, Bli Bli Qld 4560

Preferred presentation

Oral

Preferred session

Session 1: WG Animal Data Exchange – Decision Support Tools of the Future – Promoting Sustainability Farm Management

Email of corresponding author

jo.newton@agriculture.vic.gov.au

Title of your paper

Stakeholder engagement to support the development of next generation decision support tools

Insert ABSTRACT text

Making informed management decisions in making mating decisions and culling cows impacts farm financial performance and the health and welfare of cows. Cow performance is influenced by many factors including genetic effects (e.g. breeding values), non-genetic effects (e.g. lactation number, calving date, illness) and farming system (e.g. feeding system, climate). Current management tools available in Australia do not jointly consider all these information sources. Novel data sources, continued improvements to data pipelines, more frequent genetic evaluations and advances in computing power means an opportunity exists to develop new decision support tools which combine genetic effects, non-genetic information and novel data sources to predict the future performance of cows. Adoption of this next generation of tools is contingent on them been valued by farmers and industry stakeholders and meeting their needs.

To ensure this next generation of decision supports tools aligns to farmer needs, a series of focus groups and one-on-one interviews were held to seek dairy farmer and industry stakeholders' feedback on

tools being considered for development from December 2023 – March 2024. Using a semi-structured facilitation style, these sessions sought to understand what information farmers were currently using to make decisions on culling and mating. Participants were then introduced to the concept of next generation management tools, and asked questions like: “Does a tool like this interest you?”, “What would you like to see in a tool?”. Participants were also shown some examples of different dairy breeding programs incorporating conventional dairy, female sex-sorted semen and beef semen and asked which best represented their business and how they allocated semen. A short poll at the end of the focus groups tested farmers satisfaction with current culling and mating tools.

Thematic analysis identified a several reoccurring themes. Whilst farmers were open to new tools – feedback was clear that such tools should not require duplication of data entry. Amongst farm businesses varying levels of data recording and usage of existing data in decision making was observed. “Data lovers” typically drew upon multiple information sources to make decisions, with their own ‘rules’ in place to guide decisions i.e. X days in milk before insemination. This group was open to a tool that could help automate this process. It was also recognised that the group of farmers less adept at data collection and analysis would benefit most from the tools being proposed. The need to develop a tool that could accommodate varying levels of data recording was also identified. Interest in both a culling and mating tool was seen, however interest was influenced by farm location and business stage. The importance of being able to show the value of these tools discussed. Appreciation of early engagement and feedback was also noted. This early stakeholder engagement has provided helpful feedback on the direction of new tool development. From discussions to date it is likely development of next generation decision support tools will initially focus on supporting more informed mating decisions - particularly the incorporation of beef semen and dairy sexed semen into mating programs. However, results from additional interviews conducted in March 2024 -which will be included in the full paper - will help finalise this decision.

Enter keywords

mating tool; culling tool; farmer feedback; sexed semen; beef on dairy