Project overview

MEAT & LIVESTOCK AUSTRALIA

Western Australian Mixed Farming Innovation Group (WAMFIG) Western Initiatives Implementation

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Brief summary

The Western Australian Mixed Farming Innovation Group (WAMFIG) was formed in 2017, and consisted of 16 producers, researcher and consultants from Western Australia. The group has met quarterly since then, and used communication technology such as WhatsApp to share and develop innovative practical ideas.

The group focussed its discussion around three initiatives: data integration platform for mixed farming, remote monitoring and management of livestock, and hyperspectral imaging. WAMFIG found that hyperspectral sensing did not provide a good return on investment for the WA red meat industry at this time, but it could change as the technology develops. WAMFIG's extensive groundwork formed the basis of an application programming interface (API) concept brought to MLA in Sydney, to value-add MyMLA and MyMLA tools. And through trialling remote monitoring technology, the WAMFIG provided valued, honest feedback to technology developers - particularly around how the product or service could be adopted by producers on farm. This has assisted the service providers in refining their product offering.

Overall, WAMFIG has benefitted industry through feedback on new technology, and networking of members enabling a range of knowledge and experiences with technology could be shared. The group decided they would not formally continue as part of a funded project, and would independently look into forming an interest group under the Grower Group Alliance.

Objectives

The objective of the project was to implement programs in the above three areas via additional submissions to MLA where appropriate.

For producers, this project will not only increase their current knowledge of this area, but also afford them the time to be removed from their business and compares notes with others, whilst understanding how this area of innovation can impact and/or drive their business.

WA based researchers can ensure that they are in front of global R&D by knowing what other global solutions providers are currently developing and what the needs of Australian producer's area.

Project outcomes

The WAMFIG found that hyperspectral sensing did not provide a good return on investment for industry, due to its expense and lack of repeatability across individual paddocks. The WAMFIG turned its focus to investigating near real-time pasture biomass monitoring and to reinstating Pasture from Space through MLA, which they see generating much larger benefits to producers.

The WAMFIG found there was still a long way to go in providing producers with one platform to integrate data for mixed farms. WAMFIG's extensive groundwork formed the basis of an application programming interface (API) concept brought to MLA in Sydney, to value-add MyMLA and MyMLA tools. Over the duration of the project a data integration platform for remote monitoring technology was installed at the Katanning Research Facility.

Through trialling remote monitoring technology, the WAMFIG provided valued, honest feedback to developers - particularly around how the technology could be adopted by producers on farm. The members had consistent feedback in issues with hardware, and a lack of user input and data integration. This feedback has assisted the service providers in refining their product offering. Overall, the trials by WAMFIG members found that remote monitoring technology is still developing and needs to demonstrate a better return on investment for more widespread adoption on farm.

Benefits to industry

The contribution the WAMFIG group has provided the red meat industry has been significant. The group has facilitated the sharing and circulation of research and trial results with wider industry. The members reported that the networking opportunities provided by WAMFIG has been useful when they have had to give industry presentations, as they know who to contact for research or trial results. WAMFIG members highly rated the researcher-producer interaction during the WAMFIG meetings. MLA staff members who have engaged with the group have highly valued these interactions, and continue to work with WAMFIG producer members to 'test/ground truth' ideas and concepts. The WAMFIG has supported strategic decision-making for MLA and acted as a sounding board for MLA in Western Australia.

The WAMFIG group's technology focus has also provided on-the-ground feedback on new technology, which has been fed back to developers. During the group's final meeting, there was a session on the members' experiences with remote monitoring, which included discussion with ENCO (who are taking over MOTENET). The meeting provided ENCO with an opportunity to hear feedback on the group's issues with MOTENET previously, and what they would like to see in the future. The WAMFIG meeting also created a networking opportunity for the developers, who were keen for members to get in touch after the meeting.

The members who trialled technology shared the results with not only members of the group, but others through guests to the WAMFIG meetings and grower groups. A few examples are included below, but the reach of the group has extended further than these limited examples.

The Muchas Gracias grower group have used WAMFIG discussions around remote sensing for water and connectivity (LoRaWAN) to assess its suitability on their own farms. The group has also discussed the NDVI advancements learned from researchers as a part of the WAMFIG. A group member's presentation at Great Southern Livestock'20 discussed the regenerative trial at Kalgan set up to test hyperspectral as a part of WAMFIG, which reached 150 attendees.

A group member published analysis of pasture water use efficiency using Pastures from Space data, as discussed within the WAMFIG group, which had 343 impressions.

Another group member noted that he has discussed WAMFIG with some local farmers though a local sheep group and presented his water monitoring system. He also discussed the group and project ideas with farming friends directly.

A participant has shown his local group (4G - Gingin Grass Growers Group) his LoRaWAN system monitoring electric fences and water.

The WAMFIG southern WA tour led to change in practice on some producer member's farms, and the observations from the tour have since been shared with producers outside of the group.

Future research and recommendations

The WAMFIG group will not continue to a Phase 3 with formal meetings and initiatives. The group has however committed to remain in contact via email and WhatsApp and assess future opportunities as they arise.

Some members of WAMFIG will look to form an interest group under the Grower Group Alliance. This new group will consider projects including: re-instating Pastures from Space, an integrated producer demonstration site for wearable technology, and data for benchmarking performance.