



Animal Biosecurity Investment Showcase

7 December 2021
Outcomes Report

EXECUTIVE SUMMARY

The 2021 Animal Biosecurity Investment Showcase was the second event of its kind for the National Animal Biosecurity Research, Development and Extension Strategy (NABRDES).

The 2021 showcase invited speakers with a background in conducting research, development and/or extension with smallholders and in the biosecurity/welfare field. The invited speakers presented on their experiences in their relevant field to more than 140 participants during the online event. Key topics from the invited speakers included:

- current engagement with smallholders,
- successful smallholder engagement programs,
- the importance of appropriate implementation of biosecurity for supporting animal welfare.

The presentations were followed by an interactive session where participants were divided into 12 virtual breakout rooms to develop project ideas related to a specific theme/issue:

Questions about the next steps in smallholder biosecurity:

- How should smallholder biosecurity be funded?
- How can we make smallholder programs national?
- How can we help improve smallholder biosecurity adoption?

Drawing the link between biosecurity and welfare:

- Is a welfare-centric approach to biosecurity more motivating?
- Can we better link endemic disease control to improved biosecurity and welfare?
- How can we streamline biosecurity and welfare training?

From the 12 breakout rooms, more than 20 different project ideas were recorded that were sent to participants after the event to identify key priorities. The project ideas that were generated were largely extension focused, showing that greater action is needed in this space by those with the resources and appropriate skills. Following participant prioritisation of the projects, the top projects will be discussed and further prioritised by the NABRDES Stakeholder Reference Group for progression into full project proposals.

INTRODUCTION

The 2021 Animal Biosecurity Investment Showcase was opened and facilitated by the Chair of the National Animal Biosecurity Research, Development and Extension Strategy (NABRDES) committee, Innovation Engagement Coordinator from Australian Eggs, Noella Powell. The showcase was hosted by the NABRDES and Animal Health Australia (AHA).

NABRDES has the following vision:

World-leading, cross-sectoral biosecurity RD&E through collaboration and efficient use of resources, further improving Australia's high animal health status, productivity, and ongoing market access.

The showcase themes were built upon the result of the 2019 Snapshot report. The report collated animal biosecurity RD&E efforts from the previous five years, and from this, two key topics were highlighted and used for discussion at the 2021 showcase: "Improving engagement of smallholders with biosecurity" and "understanding the importance of biosecurity for animal welfare". The aim of the showcase was to discuss and share information on these topics and to identify useful RD&E projects that are collaborative and cross-sectoral through breakout room discussions.

Dr Ashleigh Wildridge presented an overview of the new NABRDES committee structure and the results from the 2020 showcase.

The NABRDES is overseen by two committees, the Stakeholder Reference Group, and the Steering Committee. The larger stakeholder group responsible for overseeing the NABRDES consists of representatives from all NABRDES funding bodies (all state departments, Department of Agriculture, Water and the Environment and most of the animal-based research and development corporations) and observers from a number of universities, the CSIRO and Animal Health Committee (AHC). The Steering Committee is a small sub-set of the larger group and is responsible for driving the individual outputs of the NABRDES.

The 2020 showcase results were outlined including noting of the number of project ideas put forward, how they were prioritised and where the current priority projects were up to. An overview of the two priority projects was provided. They are a producer focused destruction, disposal and decontamination (DDD) planning tool and a social science project looking at barriers to biosecurity adoption and techniques to better embed biosecurity into normal farm culture. Whilst noted as high-priority projects, funding for the implementation of the projects is yet to be fully secured.

Given the challenges identified in funding priority projects, a poll was presented to participants to identify what the biggest barriers are to participating in collaborative projects (Fig 1). This poll identified 'limited budget for collaborative activities' as the most common answer. Participants were also asked in a second poll to indicate the time of year that is best for submitting projects for funding (Fig 2), the results of which showing a relatively even distribution throughout the year with a slight preference for Jan-Mar.

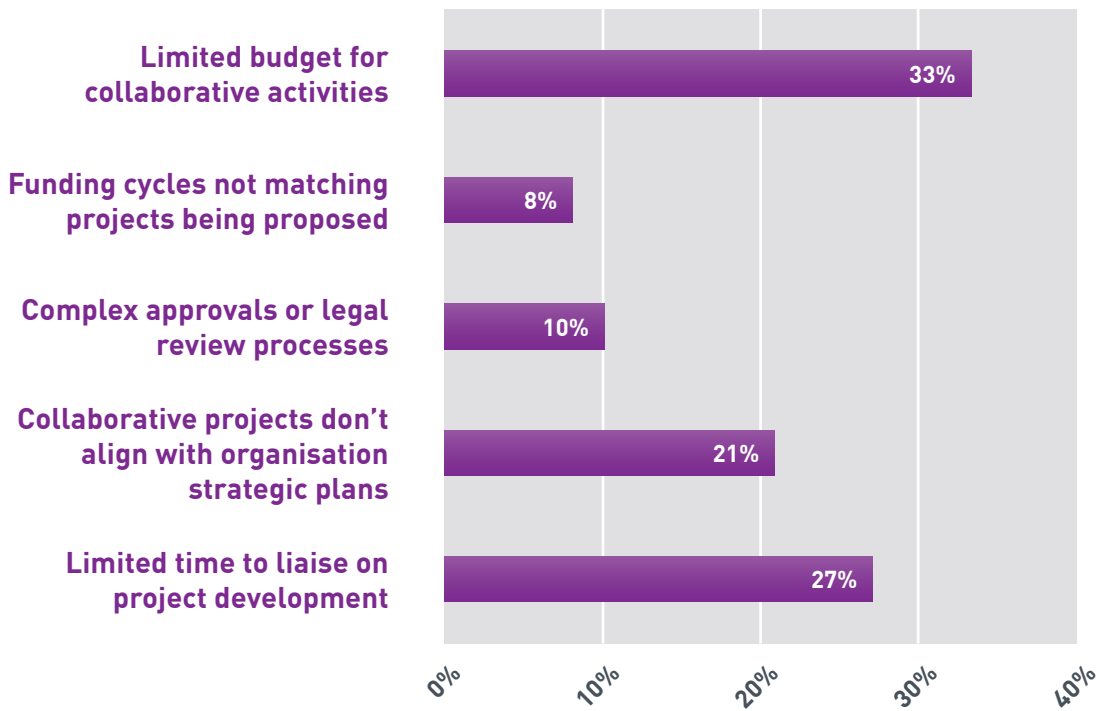


Figure 1: What are the biggest barriers to participating in collaborative projects?

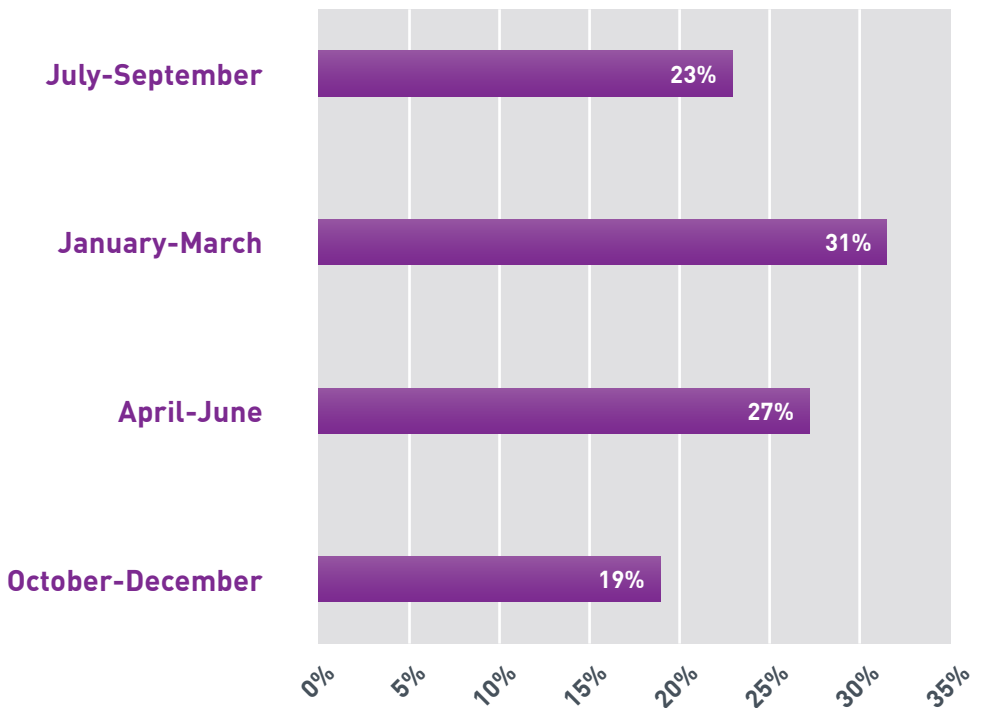


Figure 2: Based on your investment cycle, when is the best time to submit collaborative funding projects for your organisation to review?

PRESENTATION SUMMARY

The Animal Biosecurity Investment Showcase hosted four expert presenters in the field of smallholder research and engagement and in biosecurity as it relates to welfare. These presentations provided background context to the event themes in preparation for breakout room sessions towards the end of the Showcase.

Presentation session 1: The next steps in smallholder biosecurity

Understanding smallholder producer networks in Australia to improve biosecurity and animal health management

Prof. Marta Hernandez-Jover, Professor in Veterinary Epidemiology and Public Health, Associate Head of the School Research, School of Agricultural, Environmental and Veterinary Sciences, Charles Sturt University (CSU), Wagga Wagga

Marta presented results of a research project conducted by her research team and Animal Health Australia, investigating smallholder producer networks in Australia. The project focused on identifying current groups and networks supporting smallholder livestock producers across Australia, and gaps and opportunities to strengthen available support. The project involved three main activities, these being:

1. identification of main location of smallholders and current networks and groups,
2. interviews with key networks and groups to understand functioning and governance, and,
3. a cross-sectional survey among smallholders to understand current engagement with support groups and their needs and preferences on additional support.

The research project highlighted that there is no national coordination or network of support for smallholders, and that each state offers different levels of support.

Only 51.2 per cent of the smallholders that participated in the study were a current member of a group or support network, with lack of awareness on how to find support groups identified as the main reason for not being a member. The study also found that smallholders identified that there was a lack of local and relevant support available to them. Interestingly, a significant proportion of smallholders showed their interest in becoming a member and getting involved with running local networks.

Marta finished her presentation by highlighting that the next steps required to enhance smallholder biosecurity uptake are to identify ways to work with the existing groups and networks, and to involve smallholders in decision making.

Every Bit Counts

Jane Lloyd-Jones, small landholder engagement officer, Hunter Local Land Services NSW

Jane presented an overview of the “Every Bit Counts” program which is focused on addressing the challenges around the growth in popularity of small properties by landholders who have little or no previous land management experience and are often disconnected from broader land management networks. The program was aimed at improving awareness of land management requirements for landholders of properties ranging between 2–20 hectares across the NSW coast.

The project provided support through extension, information, networks, and technical advice designed to engage small landholders. The engagement activities were successful with more than 180 workshops and training days with more than 1,800 participants. There were more than 150 publications and resources developed including a dedicated website, case studies to showcase local champions, and an email subscription service called “Blockies Bootcamp”.

Online activities during COVID saw an increase in participants and provided opportunities for cross-regional engagement. Local Land Services (LLS) NSW will continue to support and collaborate with local councils, landcare, and other community networks to improve smallholders land management with a vision that the smallholder network will become self-sustaining.

Session 1 Q&A

Following the talks from Prof. Marta Hernandez-Jover and Jane Lloyd-Jones, showcase participants were asked to complete three polls.

The first poll asked participants about their organisations involvement in the smallholder space with results indicating that most participant organisations provide online resources for smallholders (Fig 3). The second poll then asked participants if they were a smallholder, which recorded that less than 20 per cent of participants were smallholders. The final poll asked participants about their opinion of what the threat of a disease outbreak is from smallholders showing that approximately 60 per cent find it extremely concerning, 40 per cent finding it no more of a concern than commercial producers, and no votes for no concern.

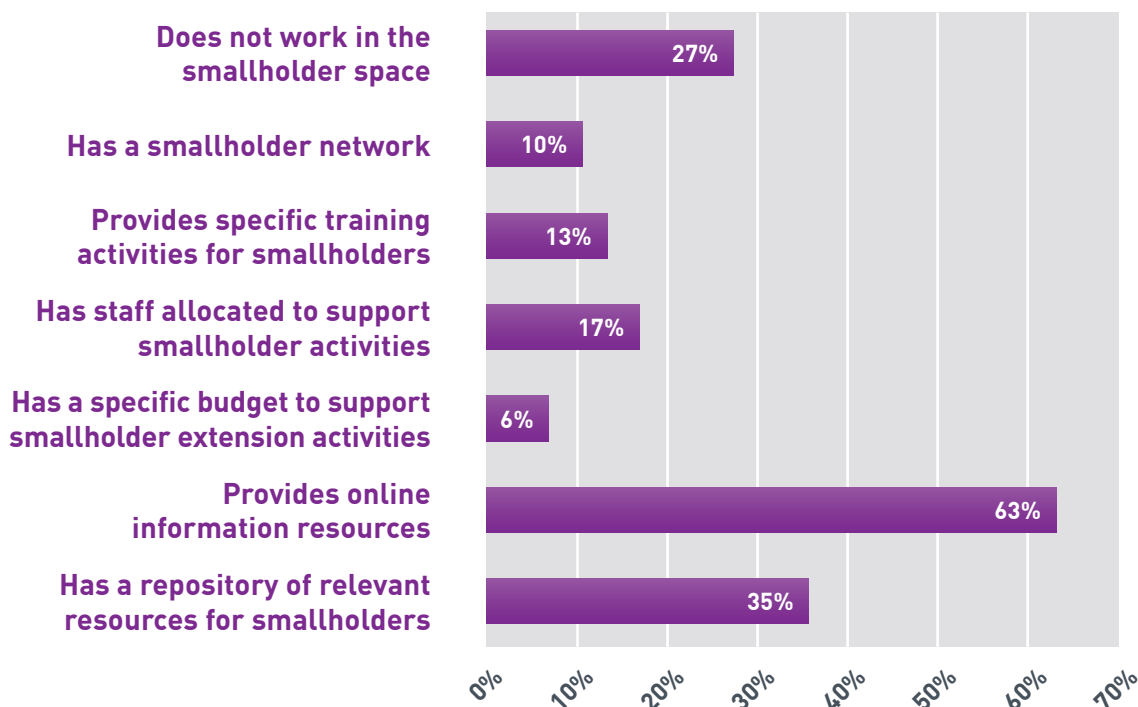


Figure 3. If you are representing a government or industry organisation, does this organisation have or provide any of the following specific resources for smallholders?

Presentation session 2: Drawing the link between biosecurity and welfare

Does biosecurity and animal welfare equal wellbeing

Assoc. Prof. David Beggs from Melbourne University

David presented on the relationship that biosecurity has with animal welfare, using examples from the dairy industry. David's focus was on using lessons from welfare and applying them to biosecurity for greater involvement and enthusiasm within the biosecurity space – make it sexy! There is a high societal value placed on animal welfare which is not carried over to biosecurity. David discussed research out of Nevada USA that found consumers purchasing animal products were still heavily influenced by freshness, taste, flavour, safety, and price, as they were rated as extremely important. Whereas humane treatment and environmentally friendly were only mildly rated. However, societal pressures can impact on industry, using the example of farrowing crates that saw supermarkets move away from products sourced from systems utilising crates. To combat this, farmers need to address the common concerns of welfare agencies and have biosecurity and welfare plans in place. An example was given around how the BIOCHECK® and WELFARECHECK® plans are created for cattle herds by Australian cattle vets. These checks help producers create a tailored farm biosecurity and welfare plan with their vet. David reflected on biosecurity messaging that up until now has focused on the individual producer becoming interested in biosecurity for their own interests. He suggested taking on the messaging currently used in the animal welfare space; future messaging should promote the impact that individual farm biosecurity has on others (e.g. their neighbours).

During the presentation from Assoc. Prof. David Beggs, showcase participants were asked if they had seen a formal written biosecurity plan for a farm in the last month where only 27 per cent of participants indicated that they had.

Is there a link between biosecurity and animal welfare?

Prof. Paul Hemsworth from University of Melbourne

Paul presented on the link between biosecurity and animal welfare with examples from pig and poultry production systems. His presentation looked at the challenges to animal welfare and biosecurity in alternative production systems. As societal concerns drive changes in animal welfare there is an associated impact on animal biosecurity. The impacts of these changes are most prevalent in alternative housing systems in the pork and poultry industries.

Paul highlighted welfare and biosecurity outcomes in terms of free-range poultry, which has strong consumer support due to the perceived improved welfare. Poultry have greater freedoms in these systems to express normal behaviour, however, these systems expose the poultry to more biosecurity risks that can compromise their health and welfare in other ways. Paul also touched on how this is similar in pig production systems, where loose-housing farrowing-lactation systems enable natural behaviour to be expressed, but often have high piglet mortality rates. This clear link between biosecurity and welfare raises the need to take a more holistic approach in designing and developing alternative systems. Paul's presentation finished with a quote:

"All these challenges need to be considered in an integrated, holistic manner, following good practices and the know-how of the farmer being central to the success of these farms. Finally, these alternative farms are above all enterprises, in which the welfare of the farmer and the economic profitability are also priorities, as well as environmental concerns." Delsart et al. (2020)

Session 2 Q&A

Following the talks from Assoc. Prof. David Beggs and Prof. Paul Hemsworth, Showcase participants were asked to complete the following two polls.

The first poll asked participants if they felt that biosecurity messaging would be more effective if it highlighted welfare impacts with almost 70 per cent of participants feeling that it could (Fig 4). The second poll then asked if participants felt that the increased public awareness of biosecurity in the current COVID climate could support a biosecurity premium being added to retail products as it does for welfare. Results of this poll showed 65 per cent of participants supported the idea and 35 per cent of participants indicated that it seems unlikely to work.

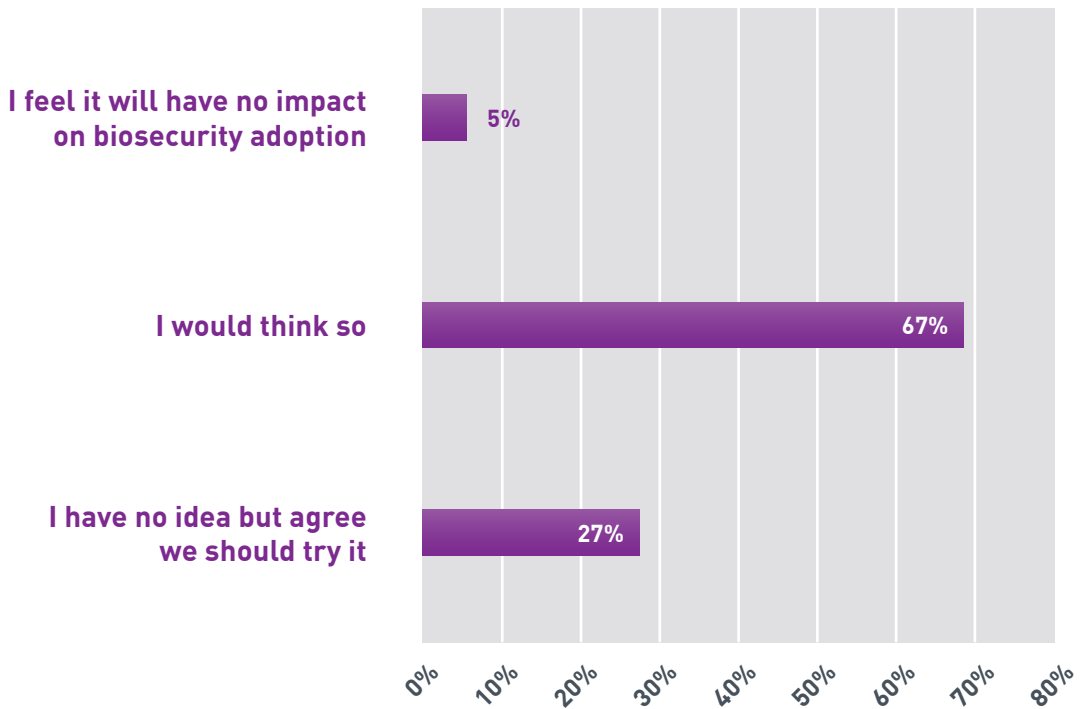


Figure 4: Would biosecurity messaging be more effective if it highlighted welfare impacts?

BREAKOUT ROOM SUMMARY

The showcase consisted of one breakout session which included 12 different breakout rooms tasked to create a project idea surrounding the central theme specific to their room. This session ran for approximately 45 minutes, where each room had a designated facilitator and scribe.

Smallholder Biosecurity – Breakout rooms

Theme:

What's the link between veterinarians (advice/knowledge) and smallholder biosecurity knowledge/practices (OR what are the gaps in veterinarian's biosecurity knowledge)? How can government, RDCs and others collaborate to efficiently fund smallholder RD&E?

Proposed projects:

- Providing training and resources to existing services (e.g. mobile abattoirs, farriers, shearers etc.) to provide smallholders biosecurity advice/support and providing a network to link them with local vets.
- Development of smallholder typologies to identify attitudes and engagement techniques.
- Upskilling vets in peri-urban areas on livestock health and biosecurity.

Theme:

How do we drive extension to best engage smallholders (to gauge their understanding)? What are the primary barriers to smallholder adoption of biosecurity? How can governments, RDCs and others collaborate to efficiently fund smallholder RD&E?

Proposed projects:

- Implementation of smallholder workshops for multi-lingual areas.
- Smallholder awareness resources targeting biosecurity and its links with health and welfare.
- PIC campaign – Engaging smallholders to register for a PIC.

Theme:

What biosecurity implementation support is currently available to smallholders with multiple species? (Providing resources which speak to requirements in a complex, small farm environment) OR How can smallholders with multiple species/operations be better supported to implement biosecurity? How can government, RDCs and others collaborate to efficiently fund smallholder RD&E?

Proposed projects:

- Production of smallholder tailored information resources.
- Implementing national standards/requirements for the informal (e.g. online) sale of livestock.

Theme:

What is the actual cost of poor smallholder biosecurity and how do we reduce it? OR is there a way to provide a cost benefit analysis of the value of smallholders to the economy? How can governments, RDCs and others collaborate to efficiently fund smallholder RD&E?

Proposed projects:

- Conduct a cost/benefit analysis of conducting biosecurity extension and adoption activities with the smallholder industry.
- Conduct a risk analysis of smallholders to Australia's biosecurity.
- Identify the value proposition for smallholders to engage in biosecurity.
- How can traceability of livestock be better enforced among smallholders (species not requiring NVDs).

Theme:

Access to small scale biosecurity resources is a challenge for smallholders trying to do the right thing. How can this challenge be reduced? How can governments, RDCs and others collaborate to efficiently fund smallholder RD&E?

Proposed projects:

- Implementation of an ongoing national smallholder network.
- School focused biosecurity education program.
- Audit of current biosecurity funding to identify gaps in funding availability.

Theme:

How do we target the community, rather than the individual smallholder? (Some areas have a high density of smallholders, is there a way to efficiently change the attitudes of the community, rather than just focus on one smallholder) How can governments, RDCs and others collaborate to efficiently fund smallholder RD&E?

Proposed projects:

- Develop a tool or resource for use by regional coordinators/organisations that provides a smallholder checklist for owning livestock with key community contact information (e.g. vets, produce stores, agents etc.).
- Clear communication in multiple languages for smallholders.

Drawing the link between biosecurity and welfare – Breakout rooms

Theme:

Can we motivate the general public to drive biosecurity as they drive animal welfare? Is a welfare-centric approach more palatable/motivating for producers resistant to adopting biosecurity?

Proposed project:

- Identification of what biosecurity practices producers are/aren't doing and why.

Theme:

What are the key endemics with welfare implications? Or What role can endemic disease prevention and animal welfare play in driving biosecurity adoption? Is a welfare-centric approach more palatable/motivating for producers resistant to adopting biosecurity?

Proposed projects:

- Education campaign tailored to small holders for disease (Johne's disease, footrot, worms, infectious laryngotracheitis) and non-disease issues (poor nutrition/management) driving animal welfare.
- Develop and define welfare and biosecurity metrics.
- Prioritising disease messaging based on biosecurity, welfare and financial impacts.

Theme:

For producers, how can we better link endemic disease control with improved farm biosecurity, (therefore improved exotic disease prevention) which leads to improved welfare? Is a welfare-centric approach more palatable/motivating for producers resistant to adopting biosecurity?

Proposed projects:

- Educating industry and small farmers on the responsibilities for animal welfare and biosecurity
- Establishing a uniform and clear link between welfare and biosecurity using evidence-based science.

Theme:

How can we streamline/integrate welfare and biosecurity training and education for farm staff? Is a welfare-centric approach more palatable/motivating for producers resistant to adopting biosecurity?

Proposed projects:

- Dedicated free online training for on farm biosecurity practices.
- Raise awareness about what biosecurity means and how it is linked to welfare.

Theme:

What biosecurity gaps are there that have clear welfare implications? How could this be used as a motivator for biosecurity adoption? Is a welfare-centric approach more palatable/motivating for producers resistant to adopting biosecurity?

Proposed projects:

- Check-in program: making livestock owners accountable for maintaining biosecurity plans.
- Investigate retail driven biosecurity incentives driving good on-farm practices and educating the general public.
- Industry-led One health messaging aimed at educating target audiences.

Theme:

How can current policies better draw the link between welfare and biosecurity? Is a welfare-centric approach more palatable/motivating for producers resistant to adopting biosecurity?

Proposed project:

- Communicating the impact of biosecurity through financial, community and welfare perspectives.

WRAP UP

At the completion of the showcase breakout rooms, Prof. Marta Hernandez-Jover and Dr Rob Barwell from AHA provided a brief, high-level summary of the breakout room discussions.

Marta moved between the smallholder biosecurity rooms and found participants identified the need to improve engagement through better extension strategies and through education of private vets and other stakeholders to improve smallholder biosecurity. Further research into identifying smallholder values and concerns at the local and regional level was identified as an important step to help target solutions and develop relevant networks for greater chance of smallholder adoption/success. A national approach was highlighted as being important across the rooms, with the need to identify the risks, and conduct a cost-benefit analysis to increase the value for smallholders to engage in biosecurity practices also discussed.

Rob also moved between several rooms and reported on discussion by one group about conducting a cost-benefit analysis of biosecurity and welfare to improve biosecurity adoption. The use of real-world examples with a whole systems approach (intensive and extensive) was proposed by one group to address the link between biosecurity and welfare. Another group discussed the need for metrics to measure biosecurity and welfare, and the need for biosecurity to become integrated into welfare plans.

To conclude, showcase participants were asked if they found the showcase helpful in identifying potential collaborative opportunities, with 94 per cent responding yes. Participants were also asked if there was enough time allocated to the breakout rooms, as the time for the breakout rooms was extended compared to the 2020 Showcase, 81 per cent of participants noted there was sufficient time. To assist with the planning of future Showcase events, participants were asked if they would prefer a face-to-face format or the current online format, 60 per cent of votes were for the online format continuing. Finally, participants were asked how they found the event overall with 60 per cent indicating it was a great event and 40 per cent selecting that it was fine.