# Animalplan webinar 3: How research ideas become projects to strengthen production animal health and biosecurity systems transcript

(Duration 1 hour 2 minutes 20 seconds)

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## Introduction

This is the transcript of a webinar presented by the Department of Agriculture, Fisheries and Forestry. Over 140 participants included individuals and representatives from state and local government and industry.

The webinar was facilitated by Dr Kylie Hewson, the Chair of the Animalplan Steering Committee.

The webinar provided a high-level overview of the process for research ideas to be realised into projects for cross-sectoral priorities. This included how biosecurity work and projects that align with Animalplan are prioritised and progressed.

## Transcript

[Webinar begins]

Kylie Hewson: Hello and welcome to our third Animalplan webinar. My name is Doctor Kylie Hewson, and I'm Chair of the Animalplan Steering Committee.

To begin with, I would like to acknowledge the traditional owners of the various lands on which we meet from across Australia today. I pay my respects to their Elders past, present and emerging, and would like to extend that respect to any Aboriginal and Torres Strait Islanders that are joining us today. I'm joining today from the lands of the Yugambeh Language region, which is south of Brisbane, down through to northern New South Wales.

So, for those of you who haven't heard of Animalplan, I'd like to just give you a quick overview of its background. Animalplan has been around for a couple of years now, and its focus is to drive action in areas of livestock, health and biosecurity that cannot succeed unless stakeholders like industry and government work together to define project needs and then implement and resource them collectively. So there's plenty of areas where there are no clear leader, no one stakeholder who is responsible for defining and investing in progress like vaccination strategies or traceability. And this does lead to duplication of efforts and missed opportunities, which is where Animalplan is trying to drive change.

On [our website](https://www.agriculture.gov.au/agriculture-land/animal/health/animal-plan), which is on the slide there, you can find progress reports which are filled with projects that are currently ongoing or have recently [been] completed, which you might actually find others are doing work similar to your own. Or you might want to reach out to them, to work with them on developing new project ideas in collective areas of interest. And also, too, we are open for you to submit your project ideas or needs through to the Steering Committee, and we can help find you the right sorts of collaborators and communicate your projects like elevating the visibility of things that are already ongoing.

So today we will have a presentation first from Dr Mark Cozens from Animal Health Australia, and then we'll hear from Annette Dougall from the Department of Agriculture, Fisheries and Forestry, and finally from Mrs Tanya Pittard and Dr Rebecca Morrison from Australian Pork Limited.

So, these presenters have been brought together for this webinar to provide you with perspectives across the production animal sector. And I hope that from this you can gain some insight into the process which projects should go through to ensure we can reduce duplication and increase cooperation, which is essentially the motto for Animalplan.

So, the goal today is to help those who undertake research projects, understand how decisions on investment are made that impact on animal health and biosecurity projects.

I just wanted to give you a quick example of what we mean by the process for projects that we're hoping to see implemented more broadly across the system. So, an example is here up on the slide, on the development of an Animal Antimicrobial Stewardship Assessment Framework. Now, this project was co-ordinated from the beginning between industry and government. It was an idea born out of discussions with industry about antimicrobial stewardship needs.

The idea was then refined through consultation with DAFF and government stakeholders. CSIRO allocated the initial funding to start the project which utilised a user centric co-design approach with an antimicrobial stewardship practise group. So essentially a group of individuals who oversee antimicrobial stewardship on the ground every day. Those who are going to benefit directly from the framework actually helped to create it. It wasn't just experts coming around saying this is what it needs to look like.

But once the project started, it was reported through to Animalplan via one of our key stakeholder groups, with requests for input on how best to scale the work. So, the work started out at a pilot scale and wanted to move to a more national scale in supporting other livestock sectors. But also, options for additional funding. So advice on where the best sources for funding should be, because these sorts of projects don't often fit within research funding budgets or they fit within the implementation stream and sort of may sit outside the realm of traditional funding pathways.

The Animalplan Steering Committee reviewed the project and provided advice that there could be value for the Department of Agriculture, Fisheries and Forestry to invest in the project to expand it to include the wildlife sector and support foundational work for a broader national level assessment. As these were needs aligned to key strategic AMR *[anti-microbial resistance]* documents, which in this context was the national antimicrobial resistance strategy. The project is now included in progress reports so you can read those, as I said before, on the Animalplan website, and is communicated with broader stakeholders. So that's an ongoing piece of work.

So that's the basis for the webinar today. Just a quick bit of housekeeping. So, there is a Q&A symbol on the top right of your screen, where you're welcome to place any questions you might have throughout the webinar. We're hoping to have some time at the end of the presentations for some Q&A, so pop your questions in there and we'll get to them. But our first presenter for today is Dr Mark Cozens from Animal Health Australia, and I will hand over to you, Mark. Thank you.

Mark Cozens: Well, thanks, Kylie, and good morning. Thanks for joining me for a brief presentation on Animal Health Australia's role in the national animal health system with a focus on AUSVETPLAN and the EADRA.

So, we have four topics that I want to cover briefly today. Brief overview of AHA or Animal Health Australia, the Emergency Animal Disease Response Agreement or EADRA, the Australian Veterinary Emergency Plan or AUSVETPLAN, and AHA’s role in activity and project prioritisation.

So, I'll just start off with that brief overview of AHA, recognising its really important role that it plays in emergency preparedness and response.

So, AHA is not a government agency, nor is it an industry organisation. Rather, it's an independent, not for profit company with funding members from both government and industry. So, our government members are the Australian government and all state and territory governments across Australia. Our industry members are 14 peak industry bodies, and we have 12 associate members as well.

So, our members fund core company activities through annual subscriptions and AHA’s role is to manage more than 50 national animal health programmes and projects that improve animal and associated human health, biosecurity, market access, animal productivity and food safety and quality. So, our members play a key role in the development and implementation of all these programmes and it's this collaborative approach that's a major factor behind the success of AHA’s programmes and further strengthening of partnerships between government and industry is an ongoing priority of AHA. So, we also conduct and host a range of EAD, or emergency animal disease, training exercises, courses and online learning portals, and we also manage two vaccine banks.

So, enhancing Australia's capacity or capability to detect and respond to emergency animal diseases is a key priority for AHA. And two key programmes of AHA to help meet this goal are the EADRA and AUSVETPLAN, and both have multiple stakeholders and funding sources.

So, I'll just move on and have a quick introduction to the EADRA, or the Emergency Animal Disease Response Agreement. So, the EADRA is a formal, legally binding agreement between Animal Health Australia, the Australian government, and all state and territory governments, and the 14 livestock industry signatories or parties. And it covers the management and funding of responses to EAD incidents aiming to reduce the risk of EAD incursions and provide surety of funding to cost shared responses. So, it also provides clarity about signatory’s roles, responsibilities and requirements before and during a cost shared EAD response. And it achieves this in part by providing that parties that fund a response to an EAD, a role in decision making about the response and its funding. And so, this in turn supports Australia to be well prepared, respond rapidly and return to normal as quickly as possible.

So, in terms of cost sharing, the EADRA categorises emergency animal diseases into four broad categories.

So, Category 1 are those diseases that are predominantly seriously affecting human health or the environment but may only have minimal direct consequences to the livestock industries. And they're funded wholly by government. This includes diseases such as Rabies.

Category 2 diseases are EADs that have the potential to cause major national socio-economic consequences through various serious international trade losses and disruptions. This category can also include diseases that may have slightly lower national socio-economic consequences but have a significant public health or environmental consequence. So, diseases in this group include foot and mouth disease, screw-worm fly, sheep and goat pox, and high pathogenicity avian influenzas of virus subtypes H5 and H7.

Category 3 diseases have the potential to cause significant national socio-economic consequences through international trade losses and market disruptions but have minimal or no effect on human health or the environment, and they're funded equally by government and industry. And this includes diseases such as African horse sickness, African swine fever, lumpy skin disease, blue tongue, classical swine fever, Newcastle disease.

And lastly, we have Category 4 diseases that could be classified as being mainly production loss diseases. And this includes equine influenza, influenza A virus of swine and also transmissible gastroenteritis. And these diseases are funded 20% by government and 80% by industry.

So now that I've covered the EADRA, I'll just move over and give a brief overview of the AUSVETPLAN or the Australian Veterinary Emergency Plan.

So, AUSVETPLAN is a series of manuals that sets out the agreed national policy and guidelines for agencies and organisations involved in response to an EAD. It's made up of a series of public documents, and this includes an overview manual, response strategies for all the emergency animal diseases that are listed in the EADRA, enterprise manuals, management manuals, guidance documents, and resource documents. And it's really important that when you're reading one manual, you often have to refer to other manuals. So, it's read as a suite.

So, AUSVETPLAN is super important. I mean, it sets out how Australia would respond to an EAD, ensures a rapid response with no or minimal time lost in developing policy and hopefully enables a return to business as usual as quickly as possible.

So, AHA's role in developing AUSVETPLAN is to facilitate stakeholder engagement and consultation to develop agreed national response plans. And we also have a role in maintaining these manuals, including periodic updates and development of new manuals in consultation with our stakeholders. AHA doesn't set national EAD response policy, but rather brokers agreed approaches between government and industry EADRA signatories.

There are 62 manuals that are published on the website, and they all need to be kept up to date, so it's a big job, and the decision to update those manuals can come from several places. Firstly, it can be routine review, it could be a change in the risk or the priorities of

the disease to Australia, changes to international standards, feedback from relevant exercises or incidents, change or new knowledge in science and disease, epidemiology, and also technological advances. And so that and all those collectively inform the prioritisation of review or development of all that plan manuals.

And lastly, I just wanted to talk on the role of AHA in project prioritisation. So, AHA doesn't set government or industry project priorities, but rather with respect to AUSVETPLAN and EADRA, AHA will facilitate stakeholder consultation to agree on priority AUSVETPLAN manuals and the EADRA work. And AHA will undertake agreed projects on behalf of, or in partnership with government and industry.

That's all I have, and I understand there will be an opportunity for questions following the presentations. Thank you.

Kylie Hewson: Thank you very much for that, Mark. I think that’s a really important overview for those of you watching, that if you're undertaking any research or planning to do any research that has anything to do with how Australia responds to emergency animal diseases, it needs to fit within these frameworks that Mark just spoke about, if it's going to have impact and be adopted. So, thank you for that Mark. Yes, could you put your questions in the chat.

The next speaker is Dr Annette Dougall from the Department of Agriculture, Fisheries and Forestry. She’s going to talk us through an example of the sorts of national strategies that also drive prioritisation and action in areas that are relevant to animal health and biosecurity. So over to you, Annette.

Annette Dougall: Thank you, Kylie, and thank you, Mark, for being so set to time because I've got quite a bit of a presentation to get through, and hopefully I won't go too much over time. Today I'm coming to you from Ngunnawal country in Canberra and I'm going to talk about the diagnostics business plan and provide some examples to give you context of how it's used.

So, before I jump into that, I'm just going to explain Australia's animal health laboratories, which are responsible for diagnostics for emergency animal diseases, and they consist of all of our jurisdictional and animal health laboratories from the states and territories, including Australia's Centre for Disease Preparedness. Each member has representation on SCAHLS, the Subcommittee for Animal Health Laboratory Standards, which provides scientific policy and advice to the Animal Health Committee on terrestrial animal health laboratory issues. It also has representatives from AHA and representatives from the Public Health Network and university.

The Laboratories for Emergency Animal Disease Diagnosis and Response are also important and report to SCAHLS, and they are responsible for coordinating a national laboratory network to detect and support the management of selected terrestrial and aquatic emergency animal diseases. And they operate as a forum to discuss technical issues in the laboratory and also to harmonise assays across the network using a proficiency testing programme and network quality controls and they report to AHC via the Subcommittee for Animal Health Laboratory Standards.

So, the diagnostics business plan meets objective two of Animalplan, and that's to improve Australia's surveillance, and diagnostic capacity for animal pests and diseases. It ensures that we maintain and improve our national diagnostic capabilities, and it outlines the priorities to do that. And most importantly, it's not a DAFF document. It's developed collaboratively by the animal health laboratories, governments, universities, and industry stakeholders. And it is an integral part of Australia's national animal health system through the animal health laboratories, which underpin national and international trade and market access for animals and animal products, and help to safeguard and improve animal and public health in Australia.

So, before I jump into some of the projects that relate and fall under this business plan, I just want to emphasise the scope of the business plan, and that's the laboratory diagnostics in infectious diseases. These are the infectious diseases, which many of what Mark was talking about, of national and international significance of terrestrial and aquatic wildlife species, not aquatic sorry, domestic animals and wildlife species. Importantly, not aquatic, which is covered by, of course, AQUAPLAN. And that's where you, if you were interested in working with an aquatic animal diseases, you would go there. It also covers, exotic, endemic, reemerging diseases, and also anti-microbial resistance.

So, under the business plan, there are 5 key objectives, and under each objective there are specific activities that relate to meeting those objectives. I'm not going to go into them in detail, and that will probably bore you to death, but I'm going to try and stick with and highlight some particular objectives, particularly high throughput sequencing. But I will mention here that Objective 3 - we have many projects funded, that sort of meet Objective 3 or developing new diagnostic assays for emergency animal disease. One example is some lumpy skin disease diagnostics, which has been rolled out through the LEADDR laboratory network, and now has its own quality assurance programme. There are also some other diseases, like equine piroplasmosis, Johne's disease, blue tongue, various other ones, that which we have some projects relating to this objective.

So, jumping over to high throughput sequencing, I'm just going to mention a couple of activities under this objective. One of them is about developing nationally agreed minimum standards, and that has been done. So, there is a policy, well, like a guideline available, which was developed collaboratively with also our plant health colleagues on how to, generation and analysis of high throughput sequencing, and that is complete and available on our website.

There's also, I mentioned the Australian Biosecurity Database, which is a curated collection of reference viral genome sequences based on national notifiable disease list for terrestrial animals. And I know previously, Animalplan has featured this database in one of its webinars, so I'm not going to go into detail. But just to say, this project is ongoing, and it's very important if you are working in research and you are generating high throughput sequencing results and you find something in your samples you can go to this verified database to determine what's going on. It's currently being expanded to include further subtypes, genotypes, and bacterial pathogens.

Some other activities that might be of interest to researchers out there, could be developing standard bioinformatic pipelines for pathogenicity, AMR, anthelminthic resistance, and also notifiable pathogens. And I guess a lot of activities relating to Objective 1 are about increasing our capability and capacity to use HTS [high throughput sequencing] in diagnostics for animal diseases.

I'm just going to touch on a couple of projects related to the objective. One example is a project that's come out of Australian Centre of Disease Preparedness. And it's all about establishing standardised procedures and workflows for different types of viruses when you're trying to do infectious agents’ discovery. So, depending on whether it's a double stranded DNA virus or it's a single stranded RNA virus, it's developing those wet lab techniques and standardising them so that when you when you do get your sequencing results that it's consistent and comparable. And these types of standard operating procedures right through from the sample to the output and the bioinformatic analysis will eventually be used across the animal health laboratories.

Another example I just wanted to highlight is a big project that we have in a northern Australia, and that's the Northern Australia Biosecurity sequencing NABSeq project. It is based out of Darwin at the Northern Territory Berrimah Veterinary Laboratories. And the main aim of this project is to develop a high throughput sequencing network and to facilitate, enhance northern Australian biosecurity.

So, I've just briefly touched on some of the outputs of this project and why it's important. The most important output of this project is to develop collaborations across the north in high throughput sequencing and that twin-labbing approach. Some of the outputs include that those staff have been trained and students are part of this project more broadly, to learn techniques and to participate. It has already looked at several unknown viruses that are stored away in historical collections, from the National Arbovirus Monitoring Program and other surveillance programmes. And it's identified 48 of 77 unknown viruses. It also found a novel hantavirus in a ghost bat. And at the moment I know there's much more sequencing being done and ready for analysis soon which will, I'm sure, bring out some new findings which may be of interest. There are many other things happening with that project, but I just really don't have time to go into them in great detail today.

So, what sort of opportunities might there be out for you if you were interested in, you have projects that might relate to the diagnostics business plan? So when you look at the business plan, and you think about the animal health laboratories, what we're interested in is collaborative projects and co-ordinated projects, so it's often good to have collaborations with animal health laboratories in your state or national laboratory, or territory. They need to be feasible and they need to have tangible outcomes. And I know that can be frustrating as a researcher, but it really is something that we aim for. It also, of course, needs to meet the plan, and we can also consider other national strategies and plans. And if you have something that you want to share with us, that you want to talk about or make some contacts then you're more than welcome to contact us through [animalhealthlaboratories@aff.gov.au](mailto:animalhealthlaboratories@aff.gov.au).

So, just going back to the key objectives, I wanted to sort of highlight some other objectives where there might be some opportunities if you're working for, say, with point-of-care testing or, if you're working with antimicrobial (AMRs). So, under Objective 4, point-of-care testing is the focus, and there already is an Animal Health Committee point-of-care testing Task Group, which is developing high level policy for the use of point-of-care testing, in animals for notifiable diseases in Australia. There's several approaches to testing, like for test evaluation and validation, that are being explored through this objective. One example of that is a project out of EMAI, is around evaluating or validating a point-of-care PCR platform for use in the field to test for, it's a multiplex PCR to test for, emergency animal diseases in the field. But it's a bit of a hot topic at the moment, so I guess there's room to include some more projects with point-of-care testing.

So, under Objective 5 there's a little bit of a gap. We haven't directly got - but some of the states and territories may have - projects meeting this objective that I haven't talked about today. But there is an Antimicrobial Resistance Testing Technical Working Group and I guess one of the activities under this objective, which may be of relevance to you, is developing, assessing or further refining innovative, high quality comparable veterinary AMR testing techniques and procedures.

I would encourage you, if you think you've got projects relating to AMR, again, to contact us. And we can get you in touch with the Antimicrobial Resistance Testing Technical Working Group, which sits under SCAHLS. They have projects in development and ideas themselves, so it’s just to avoid that duplication which we were talking about earlier. I think it's good that, we can make those connections.

So, I just – really briefly at the end, I know I'm probably running out of time – I wanted to touch on the National Animal Health Surveillance Plan, and it's kind of similar to the Diagnostics Business Plan and sits under Animalplan and informs the surveillance component. And again it's developed in a similar way to the Diagnostics Business Plan, and it sets out activities and objectives, developed in a collaborative way. It summarises existing surveillance programmes and will guide Australian governments and industry to deliver on national priority surveillance activities over the coming period.

Similar to the Diagnostics Business Plan, it has five key objectives, and I guess when you think about diagnostics and the Diagnostics Business Plan a lot of things involving genomics or point-of-care testing overlaps with surveillance. So Objective 2: Robust, verifiable, timely detection and reporting of notifiable and emerging animal diseases would be where that overlap occurs. I think it's also important to note that, while diagnostics is important, surveillance is an equally important component of Australian's national animal health system. It facilitates market access in international markets and supports the management of pests and diseases.

So that's all I have for today. Thank you for your time, and if you have further questions, put them in the chat or email [animalhealthlaboratories@aff.gov.au](mailto:animalhealthlaboratories@aff.gov.au).

Kylie Hewson: Thank you, Annette, that was great. It was great how you covered off on a couple of those different strategies and business plans. I think it's great to demonstrate that, even for the higher-level strategies and documents, there's all of this work in the background that goes into setting policy, directing people and resources to build the systems that can use the sorts of tools that might come through in the system for diagnostics and surveillance. So, it's not just the tech itself, it's everything that goes around that is all part of the system and the work that all of those different, strategies and documents try to drive.

So, the next presentation will be from Australian Pork Ltd: Tanya Pittard and Rebecca Morrison. So, I'll hand over to you both to take us through how you go through the process of identifying areas for investment.

Tanya Pittard: Thanks so much, Kylie. So, we'll just do a little bit of a quick introduction to Australian Pork. So, we're actually really lucky in the pork industry. Australian Pork Limited has a number of roles. We are an industry owned company, but we're also the statutory levy funded Research and Development Corporation. We also have a levy which allows us to be the marketing arm. So, we do all the generic marketing for the pork industry, which is some of the ‘get some pork on your fork’ work. We're also the peak industry body, so we sit as the signatory for the pork industry within Animal Health Australia.

We are the administrator of the PigPass Traceability System and also the administrator of the Australian Pork Industry Quality Assurance Programme – APIQ. 91% of the pork processed in Australia – and we are a domestically focused industry, so 90% of our pork is consumed domestically – but 91% of pork in Australia is produced on farms that are accredited to the API Quality Assurance Programme. One of the things we like to point out is that that is a third party independently audited system, and we're really proud of the standards to which the pork industry holds itself.

The reason why the different functions and structures that we hold is important to understand is that that we cover the entire supply chain. So as a $6 billion industry, we're a small industry in Australia, but there are around 5.7 million pigs produced commercially, and there's around 6,600 people who have pigs or produce pigs. But the vast majority of the pork consumed in Australia is produced by a small number of commercial producers. But that doesn't mean that the research that we do is only about the large or very large commercial businesses. We try to do research that covers the entire supply chain. And biosecurity is one of our absolute priorities in our strategic plan within our research framework, and within all of the work that we do. So, we are a very collaborative industry, we're a very passionate industry, but we're also very, very keen on getting the message through today that one of our mottos is ‘Nothing about us without us’.

So, I'm going to hand over in just a second to Dr Rebecca Morrison, who is our GM of research and innovation. But one of the key messages today is that there is a lot of work that is done by the industry, within the industry, in a very collaborative way, with governments and with universities and with others. But one of the best things to do if you're thinking about a project that will have an impact on or might be of interest to the pork industry is to actually touch base with us, because our focus is for research that can be practically applied on farm. And that fits in with the core biosecurity priorities for the industry. So, there's any number of research topics that we're currently involved in at the minute. And there's also other research that is on our priority list that we'd like to work with people on, but that research is driven by producers for producers and for the supply chain. Thanks. And I'll hand over to Bec.

Rebecca Morrison: Thank you, Tan. The research and innovation underpins everything that we do in the pork industry, particularly around sustainability, ensuring that our producers in our industry thrive, and importantly, ensuring that our piglet or pigs are safe and healthy. And that's why it's so important that we're coming together today with the research community, to potentially tap into other animal health and welfare and biosecurity programmes to look after our pigs and our producers.

So, at APL we invest in research and in development that improves productivity, profitability for our producers, and sustainability for our producers. We conduct ongoing research and investment into a whole range of areas, as Tan mentioned, around animal health, biosecurity, welfare, climate friendly farming, cost of production, eating quality and traceability. And importantly, that research is collaborative. We consult with a wide – obviously all of our producers – but that also extends to veterinarians, nutritionists, processors and industry consultants, too, as part of that network. And importantly, we do collaborate with the other RDCs. So, it's amazing what we can learn from other industries and the innovation that's happening in the other agricultural animal industries, and how that can be applied to us.

So, I can't emphasise enough that importance of collaboration and that willingness to learn from the other industries, and to avoid the duplication that has come up a number of times today.

So, our industry recently identified that we could perhaps do research and development and extension a bit better, and we went through a whole process. This has been over the past two years or so and really looking at how we can be more collaborative, how we can avoid duplication and ensure that our strategy and outcomes are really aligned with what the industry needs. And this led to what we called the Pork Industry Insight Panel, which was a group of stakeholders from the pork industry, from the whole supply chain. And this was facilitated by a new industry chief scientist, who helped pull everyone together collaborate, work with APL but also Australian Pork Research Institute Ltd [APRIL], which is another research organisation that we work with, but really importantly, the pork producers on the ground, the small, the medium, the larger producers from a range of different pig production systems, from the pork processors and from the research providers, so, the universities that help us with their research as well.

So, we got together and developed what we call the Green Paper, which is basically an environmental scan of all the challenges the industry is facing, the opportunities and the potential targets for our industry, which had never been done before in the pork industry. So, we're really, I guess setting the scene for a great future for research and development in the pork industry because of that collaborative approach, and that avoiding duplication in the research. So, the outcome from that Green Paper – so we're 12 months into that process – so we now have a chief scientist on board in our industry that we work with really closely, and the APRIL also work closely with, and that chief scientist helps us to collaborate and identify what the research priorities are.

And that Green Paper, over the last 12 months has identified five key areas for us to be working on, particularly around profitability, social licence, growth for our market – responsible growth, and importantly, for our conversation today, disease free: keeping diseases out, being prepared, eliminating any existing diseases that we have increasing, developing new vaccines and so forth and finally, around sustainability as well. So, it's identified those key areas and that sets the scene for how we will do our research and prioritise our research going forward. And fortunately, those deliverables do align with our strategic themes at APL.

So, the next steps of that, we actually we have another workshop coming up in November where again we have that collaboration from the wider industry. Then we'll work with that chief scientist to identify what those key research priorities are and that will roll into our new strategic plan for next year. So, for those of you who are really keen to work with the industry and the awesome pigs and people that we have in our industry, we really do welcome the opportunity to come and talk to us as Tanya mentioned. We are really open to working with universities and people that may not traditionally work in the pig industry, because there are lots of great ideas and lots of research happening that I know that we can use in our industry.

We currently have two different types of projects that you could apply for. All of this information is available on the website, and I do encourage you to go and have a look. We have solutions projects which are potentially short-term projects that deal with a challenge that the industry is facing now. So, its immediate needs, short-term projects, and then we have APL horizons projects. So, these are potentially much larger projects, collaborative projects that meet the strategic needs of the industry. Further information is available on the website and as I mentioned before, please reach out and talk to us if you've got some great ideas around biosecurity or health welfare research.

In terms of the research process, I assume it's fairly similar to other calls for research – reach out, contact the research and innovation manager applicable to your field, and this is all on the website. The applications are year-round, so we do have kind of a 24/7 process at this stage, and we do also do direct requests for proposals as well, so actual calls for proposals. The proposal is submitted onto Pig Connect. There's obviously milestones and stop go points. But to really emphasise, to reach out to the research and innovation manager if you have an idea, and to help guide you through this proposal process to make sure that we've got everything covered, including, aligning with our strategic plan, clear objectives, intended use, what's the extension plan and so forth, and a budget justification, considering the return on investment. So, what does this mean for a pork producer in terms of their profitability? For example, does your vaccine have the potential to improve piglet survival by 10%. So, really important to include that in the application so we can assess the potential return of your proposal.

So that proposal is reviewed, we go through an extensive internal and extensive review process, and then that proposal is presented back to our investment committee, who consists of a range of experts, including pork producers who go through a review process and consider that proposal. Then we conduct the project, we get some great outcomes and that is rolled out to our producers and stakeholders through research snapshots and fact sheets and producer days and so forth. And then importantly, once that research is completed, and we see the outcomes we go and do our return on investment again to look at the value of that and look for any potential other opportunities that may have arisen from that research.

And that's me. Thank you. Yeah, so please feel free to reach out. We really value the wider university community working in the research space.

Kylie Hewson: That's great. Thank you, Rebecca and Tanya, for giving us that that overview. That was really comprehensive. I've really appreciated the extent to which your industry clearly engages with and drives the strategic priority setting, and that's not a short process. That would take some time, as you talked to, Rebecca, to actually get the people together, build all of that, synthesise where industry is at, and then that would likely change on a regular basis pending what's happening.

So, we do have some time now for some questions. So please put your questions in the Q&A and we will set about answering those.

We've got one at the moment that we can put to the panel of speakers. Question from Peter Hunt from CSIRO. So, he says ‘Many diseases of national importance seem to be ignored by this whole process, but major issues are emerging. Anthelmintic, acaracide, insecticide resistances are becoming a major issue because of a lack of funding. We're losing capability. How can we help turn this around?’ I mean there's a couple of bits in that, Mark, if you can speak to it. It might be important just to talk through how diseases end up on the EADRA lists for starters, how those decisions are made, and then we can flick to Annette and Tanya and Rebecca. Mark.

Mark Cozens:Yeah. Thanks, Kylie. Just in terms of the EADRA or Emergency Animal Disease Response Agreement. So any of our parties to the deed can actually make a request for a disease to be categorised under the under the Emergency Animal Disease Response Agreement, but it is limited to emergency animal diseases, not diseases in general. So, once we have sufficient information from the party that's raised that particular issue for consideration or that disease for consideration, then AHA can request the Animal Health Committee to come together with representatives from those relevant industries to determine whether or not it is indeed an emergency animal disease and would fall under the EADRA. And if it's decided that – oh, and then there's a number of questions that would be addressed or worked through to determine if, in fact, that disease is an EAD. And then if it is, then see them through a categorisation process. But I must stress that the EADRA is really just for emergency animal diseases, so things like anthelmintic and acaricide resistance would be out of scope of the EADRA. Thanks Kylie.

Kylie Hewson:Thanks, Mark, that's a really good point and I'll flick to Tanya and Rebecca in a second because you touched on this a little bit as well. There's a constant tension between preparing for emergency animal diseases and better managing and dealing with existing endemic diseases, and how that influences the prioritisation of where investment goes, where industry’s focus and attention or government’s focus and attention is as well. Tanya, do you have any comments to make on that?

Tanya Pittard: Yeah. So that's probably why when we're looking at things, so, for example, the pork industry, in addition to its quality assurance programme, we actually have the Voluntary Enhanced Biosecurity Standards, which were based around all of the things that you need to do to improve biosecurity within a farm for African swine fever. But then, actually, we have an EAD, an emergency animal disease technical panel made up by experts from across industry, including a lot of vets and others from government who look at things such as the VEBS [Voluntary Enhanced Biosecurity Standards] and go alright, well, what tweaks do you make to that plan to make that applicable to all, or more diseases.

Biosecurity on farm is actually recognised as being a core component anyway, so it's part of general APIQ, and then there's the enhanced standards that producers can be accredited against. But good biosecurity is probably critical to all endemic, as well as exotic emergency disease responses. And so, then it's looking as well, we were the first livestock industry to have a plan or prescribing guidelines for the use of products as well. So that AMR, AMU and AMS all fits within those guidelines. But part of stewardship of medicines for the pigs is actually recognising that good baseline biosecurity on farm is actually absolutely critical to managing and reducing the risk of any of the diseases that can impact productivity and impact the health and welfare of the animals.

Kylie Hewson:So that's why it goes to Rebecca's point about return on investment to an extent, too, you know?

Tanya Pittard: So, yeah, shed design work, effluent management system design work, biosecurity on farm, training for staff members, training for staff to recognise diseases, point-of-care testing. Having quick tests such as the ones where you can get the pigs to chew on a on a rope and then get a quick check of multiple diseases. So, sort of that multi-path testing availability, looking at, you know, the other thing that's a bit unique to the pork industry is also that vets and nutritionists and other experts are a core component of everyday piggery operations. So having good relationships with vets is again a requirement of quality assurance programme so that they pick up the phone and go something a bit weird is going on. And then those vets link into the whole national system.

Kylie Hewson:Yeah, so vets and nutritionists are a really important part of the decision making for investment too, I would imagine, APL. But Rebecca, do you have anything else to add to this?

Rebecca Morrison:Absolutely. Yeah, to reinforce what Tanya just said and that importance of on-farm biosecurity and having that consultation with the with veterinarians, nutritionists, and so forth, those experts in that area to make sure. We only have a limited bucket of resources available for research to make sure that is spent in the most effective way, and we don't duplicate. And some of that research that is happening in that space is around that pen-side testing, so we get instant testing and also vaccine development, which is so important in this conversation as well. But yeah, I can't emphasise enough in that collaboration that's required in this space.

Kylie Hewson:But also, an important point there, Rebecca, that even if you what, you want to be able to fund research into everything but the bucket is limited. Hence, the ideas around what can we leverage from what's happening in other industries, how can we collaborate across industries and industry and government? But, Annette, did you have anything you wanted to add from the surveillance diagnostics perspective to add to the answer to previous question?

Annette Dougall:Yeah, sure, it's a good question, and I can emphasise with what Peter is saying in the space of parasitology or vector borne diseases. And we do tend to focus on those big-name diseases within good reason. Also, that there is, I guess, you know, not a full bucket of money available, so we have to prioritise. But that being said, you know, use of high throughput sequencing to monitor for anthelmintic resistance is within the scope of the Diagnostics Business Plan and other activities looking for resistance in ticks or things like that, may also be covered by the surveillance plan but don't quote me on that. Or Animalplan with the overarching objectives.

If there if there is the need and there is the technology or techniques available, particularly, things that which might be really useful on farm which I guess Rebecca and Tanya were touching on you know, that farmers can use it to monitor resistance. I will also add that we [are] planning to start the process soon for the development, or we're always considering how we're going to develop the next Diagnostics Business Plan, and we can definitely bring, I guess, more of that endemic diseases into that if it's collaboratively thought of as a national need.

Another thing I wanted to add that we do have a couple of projects which cover endemic diseases such as Johne’s disease. We have a project based at CSIRO, looking at host biomarker responses through micro RNAs to develop a diagnostic for Johne’s disease in the early stages of infection. So, yeah, there is scope there, and it is just a plan, so if there's some really good projects out there, there's no harm in asking what our thoughts are or and we may be able to point you in the right direction for collaborators or also, other funding schemes outside of the Animalplan.

Kylie Hewson:Thanks, Annette. Yeah, so great question Peter, cuts straight to the heart of the sorts of things that we're trying to improve with Animalplan and by being able to have these sorts of discussions open and honest and say, well, we want to be able to do all of these things and have an eye on all of these balls, how do we do it in such a way that we can use the resources we have as best we can?

We've probably got time for one more question. I note, access to the Green Paper from APL if anybody's interested, that is available, you can go and find that. I would strongly encourage you to if you're looking at doing research on anything to do with animal health that relates to a specific species, they will have something similar, some kind of strategic document on their website, or someone will know of something. You really want to be using those to define and inform how you develop your project ideas, and I would encourage you to take them up on their offer to speak with them about your ideas. Is there any closing thoughts from any of the speakers before I just do a bit of cross promotion for AQUAPLAN?

TanyaPittard:No, I was just going to reiterate that there's also some really good project ideas and project prioritisation that has gone into Animalplan itself because there's been a lot of work done by all of the animal industries to really think about those key gaps that create real threats for the industry. But yeah, having that involvement with industry so that the research actually has practical, practised change, applicable outcomes on farm, or through a supply chain, is really, really critical. So, talk to industries, please.

Kylie Hewson: Yeah, and I’ll just expand that Tanya by saying that that doesn't mean no blue-sky, long-term adoption research gets invested in either. It just means that from the outset you need to be having in mind, what does it need to look like when it gets to the point of adoption, when it's a new vaccine for example, if it's a vaccine for an emergency animal disease, then it'll have a different pathway that it needs to go through than if it's a vaccine for an endemic disease when it comes to regulation and approvals. But also that cost to the producer at the end of the day, you know, you can have an amazing piece of technology, but unless it's cost effective, it probably won't get adopted in the short term, at least not in Australia. Which I think talks a bit to what you mentioned to Annette, around it's not just the tech, it's not just the diagnostics or the surveillance tools themselves, it's the network of people that are brought in around that to inform how those tools need to be use so that they are effective, cost effective as well as effective in general.

So, thank you, everybody. Just on the screen here, we do have a little bit of cross promotion. So, today we're talking about Animalplan. We do have a sister plan called AQUAPLAN. They run regular webinars as well. I would strongly encourage you to sign up to their stakeholder network as well. We do work across the two plans as best as we can.

But other than that, I'd just like to say thank you everyone for attending today. It was great to have you here. I hope you got some value out of it. If you've got any feedback or suggestions for future presentations, or questions, please just email us at the email address on the screen there [animalplan@aff.gov.au]. Otherwise hope to see you next time. Thank you.

[Webinar ends]

**Acknowledgement of Country**

We acknowledge the continuous connection of First Nations Traditional Owners and Custodians to the lands, seas and waters of Australia. We recognise their care for and cultivation of Country. We pay respect to Elders past and present, and recognise their knowledge and contribution to the productivity, innovation and sustainability of Australia’s agriculture, fisheries and forestry industries.

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