

Significant Disease Investigation Training Queensland 2023/2024

Queensland Private Veterinary Practitioner Significant Disease Investigation Refresher Training Workshop Report

Workshop 1 –

11 – 12 August 2023

James Cook University, Townsville, Queensland

Workshop 2 –

22 – 23 March 2024

University of Queensland, Gatton, Queensland

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Summary

The National Significant Disease Investigation (NSDI) program is managed by Animal Health Australia (AHA) to facilitate investigation of significant disease events by private veterinary practitioners (PVPs). The program includes funding for jurisdictions to deliver training to PVPs in disease investigation to increase their level of knowledge, skills and confidence to investigate and report on significant disease events.

Utilising NSDI program funding, Biosecurity Queensland (BQ) has designed and delivered training workshops for PVPs working in mixed and large animal practices to provide them with refresher training in the detection and diagnosis of animal diseases. The focus is on significant disease investigation (SDI) training and notifiable emergency animal diseases (EADs) such as foot and mouth disease, lumpy skin disease, African swine fever and African horse sickness - that are currently posing an increased risk to Australia.

Workshop 1 was held on the 11th – 12th August 2023 at James Cook University (JCU), Townsville. Invited speakers included a pig industry veterinarian, JCU staff including the Head of Veterinary Science Professor Margaret Reilly, the Australian Deputy Chief Veterinary Officer (CVO) Dr Beth Cookson and the Queensland CVO, Dr Allison Crook.

Workshop 2 was held on the 22nd – 23rd March 2024 at the University of Queensland (UQ), Gatton. Guest speakers included pig and poultry industry veterinarians, UQ researchers and Head of Veterinary Science Professor Nigel Perkins, and the Queensland Acting CVO, Dr Fiona Thompson.

In addition to external guest speakers, workshop presenters included BQ staff from the areas of policy, field operations and laboratory/pathology. They covered various topics including the role of PVPs during an EAD response, EAD/SDI diagnostic testing, laboratory submission, exotic and endemic diseases and zoonoses.

Hands-on practical sessions were conducted on day 2 of the workshops focusing on animal disease investigation, post-mortem examination, infection control and the use of personal protective equipment (PPE), and entry/exit procedures for suspect EAD and zoonotic investigations.

This is the second year of running this training package, which is intended to be used as a pilot study to gauge the viability of BQ to run refresher workshops yearly for PVPs in QLD and to optimise use of the NSDI program funding within Queensland.

A total of 38 veterinary participants attended and completed one of the two-day refresher training workshops, which included a networking dinner on the evening of Day 1. At the completion of the workshop, participants were provided with printed and electronic copies of all presentations given during the two-day workshop as well as supplementary reference materials (e.g., factsheets, flyers on EADs).

The SDI refresher training workshops were well received by all participants and formal feedback confirmed the workshop activities were highly successful. These workshops allowed all participants to learn the current information on important livestock diseases including EADs and zoonoses (globally, nationally and locally), gain hands on experience, and refresh their skills in disease investigation, post-mortem technique and sample collection.

The workshop outputs were objectively considered to have resulted in increased knowledge and skills of PVPs to investigate significant animal disease events and to have promoted

effective collaboration between PVPs and government, as per the objectives of the NSDI program.

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Background

The goal of the NSDI program is to improve Australia's ability to detect EADs early and to support market access and trade by increasing Australia's general surveillance capability and capacity. This is achieved by promoting effective collaboration between government and PVPs and improving the quality and increasing the quantity of SDIs conducted by PVPs. It is therefore an important task for state government agricultural departments to provide opportunities for collaboration and SDI/EAD training to PVPs. This training is targeted to mixed and large animal practices and aims to refresh their knowledge and skills in the detection and diagnosis of animal diseases. Considering several recent EAD outbreaks in neighbouring countries including Indonesia and Papua New Guinea, the focus includes the significant notifiable EADs of Foot and Mouth Disease (FMD), lumpy skin disease, (LSD), African Swine Fever (ASF) and African horse sickness (AHS) that are posing an increased risk to Australia.

BQ designed a two-day workshop to refresh and increase the knowledge in the detection and diagnosis of SDI/EADs, funded under the NSDI program (administered by Animal Health Australia). The workshop is a collaborative event promoting engagement between PVPs and government and utilises speakers from government (BQ), university and non-government livestock industry veterinarians.

Objectives

The primary objective for this SDI/EAD refresher training workshop is to strengthen PVPs' knowledge and skills in the identification, investigation (including laboratory submission) and reporting of significant disease events and exotic/emergency animal diseases. Further objectives of the workshop include:

- a) Provide fit-for purpose training on exotic/emergency/nationally notifiable animal diseases, including disease investigation and post-mortem skills for epidemiological data gathering and better sample collection/submission to enhance general disease surveillance capability.
- b) Provide the opportunity for networking among PVPs, BQ veterinarians (laboratory, field, policy) and biosecurity officers in Queensland.
- c) Enhance early animal disease detection, especially for priority EADs and other nationally notifiable diseases, and provide surveillance data for proof of disease freedom to assist market access.
- d) Provide training on the proper use of personal protective equipment (PPE) and entry/exit procedures when dealing with suspected zoonotic and/or EADs.
- e) Develop BQ's capability for delivery of effective future exotic, emergency and emerging animal disease training for all stakeholders.

Workshop participants

The Queensland Veterinary Surgeons Board (VSB) was approached for the list of current registered veterinarians in Queensland. Workshop invitations were sent via email from the Queensland CVO to veterinarians who, during VSB registration, indicated that they worked in mixed or large animal practice.

More than 50 veterinarians registered their interest to attend a workshop, with a total of 38 participants attending. Most participants worked in private veterinary practice, with a smaller

number of industry and abattoir (DAFF) veterinarians in attendance. The number of private veterinarians able to attend tended to reduce closer to the workshop due to reasons beyond the control of BQ.

In addition to sponsored participants, each workshop was attended by approximately 14 presenters, consisting of veterinarians, pathologists and policy staff from BQ, university staff, and invited external speakers.

Workshop program

The workshop programs (Appendix 1 & 2) were designed to cover several major topics including exotic and endemic animal diseases relevant to the livestock industry in Queensland, government veterinary laboratory diagnostic capability, disease investigation, post-mortem, sample collection and submission, workplace health and safety and on-farm biosecurity entry/exit procedures.

Presentation outlines

The workshops were opened by the Queensland CVO with a discussion on the role of PVPs in an EAD outbreak situation. She highlighted the need for enhanced general surveillance for early detection and the importance of producer engagement and education. The CVO emphasised the need for private practitioners to have the appropriate knowledge and skills to perform an effective disease investigation and to maximise the chances of getting a diagnosis.

Presentations were also given by the Biosecurity Science Laboratory (BSL) veterinary pathologists who provided an overview of the role of the BSL for animal disease diagnostic testing. They highlighted the criteria for acceptance of samples, case management, the role of the private veterinarian in conducting disease investigations and the role of the duty pathologist when managing cases.

The director of BQ's Emergency Animal Disease Preparedness team gave a presentation on the Emergency Animal Disease Response Agreement (EADRA) and outlined the changes for several AUSVETPLAN manuals including the Operational, Enterprise, Management and Response Strategy Manuals which have been updated recently.

BQ policy and veterinary officers gave presentations on various animal diseases of interest. An overview of important exotic diseases, including foot-and-mouth disease, African swine disease and lumpy skin disease, and their differential diagnoses was provided. Zoonotic diseases relevant for veterinary practitioners in Queensland such as anthrax, *Brucella suis*, Q fever and Hendra virus were discussed in an open forum, facilitating discussion on PVPs' workplace health and safety considerations when dealing with zoonoses. An overview of the NSDI program as well as other national surveillance programs and how these programs are administered and reported in Queensland was also delivered.

Highly experienced pig and poultry industry veterinarians gave great presentations on their industry practice and clinical pictures of endemic diseases that could trigger sample submission for excluding EADs as a differential diagnosis.

Workshop 1 included presentations on the Northern Australian Biosecurity Surveillance Network (NABSnet) and the Northern Australia Coordination Network (NACN), of specific relevance to a northern Australian audience.

On day 2 participants actively engaged in post-mortem examinations, sample collection and packaging practical sessions using sheep and poultry carcasses.

Participants were also provided with take-home resources such as a hard copy veterinary laboratory user guide, EAD flyers and screw-worm fly sampling kits.

Animal ethics approval

There were ten sheep and ten chickens provided deceased for each workshop by James Cook University and the University of Queensland, under their respective animal ethics approvals.

Workshop expenditure

Activity or item	Estimated Annual Budget		Workshop 1 expenditure		Workshop 2 expenditure	
	BQ funds (in-kind)	NSDIP funds	BQ funds (in-kind)	NSDIP funds	BQ funds (in-kind)	NSDIP funds
Workshop preparation (in-kind) - Planning - Marketing/comms/invitations - AEC approval - Venue coordination - Event/catering coordination - Preparation of training material	(\$16,500)	\$0	(\$10,300)	\$0	(\$10,300)	\$0
Venue expenses - Seminar room hire - Necropsy facility hire - Animals for PM	\$0	\$12,000	\$0	\$4995.82	\$0	\$3045.15
Workshop consumables - Lab sampling equip - Necropsy PPE - Exit/entry equip	\$0	\$2000	\$0	\$487.75	\$0	\$72.78
Participant 'take-home' materials - Hard copy VLOG - EAD sampling kits/brochures - Printed notes	\$600	\$1,200	\$180	\$251.59	\$420	\$440.10
Workshop catering morning/afternoon tea & lunch	\$0	\$5,400	\$0	\$1719.77	\$325.64	\$2060.14
Workshop dinner	\$1,200	\$2,400	\$808.90	\$955.75	\$249.08	\$782.73
Presenters' contribution (in-kind) - preparation & delivery of presentations - attendance at workshop	(\$)*	\$0	(\$15,700)	\$0	(\$13,650)	\$0
BQ presenter expenses flights, accommodation, car hire	\$*	\$0	\$7,518.22	\$0	\$2,281.70	\$0
External presenter expenses flights, accommodation, car hire	\$0	\$2000	\$0	\$870.65	\$0	\$139.09
TOTAL (all figures ex. GST)	\$18,300	\$25,000	\$34,327.12	\$9,368.39	\$27,226.42	\$6,539.99

*Costs not estimated in the annual budget - \$ for actuals and (\$) for in-kind

NSDI program funds claimed for the 2023/24 financial year to deliver the PVP SDI training program, totalled \$15,908.38 (ex GST). This amount was \$9,091.62 less than the original \$25,000 budget. This unspent balance will be reallocated with the remaining Queensland NSDI program annual budget for claims against the costs of laboratory testing for eligible SDI submissions.

The original training proposal budgeted \$18,300 for costs to BQ. This amount considered the in-kind contribution of the organiser's time for preparing the training workshops (approx. 0.1FTE) as well as the actual costs for pre-printed ancillary training materials and a proportion of catering (meals for non-presenting BQ staff & sponsored students). However, the significant in-kind contribution of BQ speakers, as well as their travel expenses (flights, accommodation, car hire, etc.) were not estimated in the proposed budget.

As an objective of this training activity is to gauge the viability of these workshops, an attempt to capture all costs incurred by BQ has been made retrospectively and included in the table of expenditure above. The total cost to BQ for running these workshops in 2023/24 is therefore estimated to have been approximately \$61,700, with around \$50,000 of in-kind contribution and \$11,700 in actuals. Weekend wages were not included in these calculations.

Workshop evaluation

An evaluation form was given to each participant at the conclusion of the workshop on day 2.

Of the 38 participants who completed this two-day workshop, 29 completed and returned the feedback forms. The feedback forms asked participants to rate each presentation/practical session on a scale of 1 to 5, with 1 indicating the least useful and 5 being the most useful. In addition, participants were also asked to rate the venue and catering and provide feedback on the length of the workshop.

Participant responses averaged 4.5 or greater for all survey questions for both workshops.

All participants felt the length of the workshop was just right and indicated that Friday and Saturday are the most suitable days for the workshop to be held. The venues and catering for the workshop also received overwhelming favourable feedback.

All participants indicated they would recommend this workshop to colleagues.

Suggested improvement

The workshop evaluation form also allowed participants to provide free-text comments on various aspects of the workshop, either specifically in relation to each session or as general suggestions on improving the workshop. This feedback was evaluated for possible incorporation into future workshops.

Following the completion of each workshop, a review meeting was conducted with all available BQ and University staff that contributed to the organisation and presentations for the workshop. This meeting provided staff an open forum to discuss what worked well and identify areas for improvement.

Additional feedback was obtained from the Australian Veterinary Association and other informal conversations.

Workshop outputs

The workshop participants agreed the workshop was a useful refresher that helped them to refresh some knowledge and skills but also learn some new/correct skills, especially from the practical sessions. BSL has also provided the Veterinary Laboratory User Guide to all participants.

This workshop has been beneficial to not only the individual PVPs, but also the university and BQ staff. These achievements include the strengthening of PVPs' skills and knowledge in

identifying and reporting EADs, investigation of significant disease events, improved sample collection and laboratory submission to improve animal disease diagnosis, proper use of personal protective equipment (PPE) and entry/exit procedures when dealing with suspected zoonotic and/or exotic animal diseases, and the development of BQ's capability for delivery of effective future exotic, emergency and emerging animal disease training for all stakeholders.

Additionally, the workshop facilitated networking among workshop attendees, speakers, university and BQ staff and promoted future collaboration and communication between non-government veterinary practitioners and government.

Acknowledgement

The authors would like to thank Animal Health Australia in coordinating the provision of funding for disease investigation training and all the speakers who kindly donated their time to give presentations during these workshops. Thanks also to BQ staff from central and regional offices (veterinary officers, biosecurity officers, policy officers) and the BSL who assisted in organising training materials, venue hire and logistics. A special thanks must go to both James Cook University and University of Queensland Schools of Veterinary Science for facilitating the use of their facilities and supplying post-mortem specimens used during the practical sessions. Finally, a big thank you to all the participants who have been very enthusiastic and interactive, making these workshops a success.

Appendices

Appendix 1: Workshop 1 program

Appendix 2: Workshop 2 program

Appendix 1: Workshop 1 (Townsville, August 2023) program

Two-day workshop for northern Queensland veterinary practitioners

Day 1 – Friday 11th August 2023 – Veterinary and Biomedical Sciences, JCU

Time	Title	Presenter(s)
7.45	Registration with tea and coffee	
8.00	Introduction and housekeeping	David Thomson, Animal Biosecurity & Welfare (ABW), Biosecurity Queensland (BQ)
8.10	Welcome to JCU and JCU Veterinary Science Update	Margaret Reilly Head of Veterinary Science, James Cook University (JCU)
8.30	Welcome Emergency animal diseases and the role of private veterinarians	Allison Crook General Manager and CVO, ABW, BQ
8.50	Emergency animal disease outbreak response – Emergency Animals Disease Response Agreement (EADRA) and AUSVETPLAN	Fiona Thompson Director, Biosecurity Response Preparedness, ABW, BQ
9.10	National animal biosecurity programs	Joanne Mollinger, ABW, BQ
9.30	Exotic and emergency animal diseases diagnostic testing	Shirley Turner, Biosecurity Science Laboratory (BSL), ABW, BQ
10.00	Sample preservation, packaging and submission	Shirley Turner, BSL, ABW, BQ
10.30	Morning tea	
11.00	Northern Australian Biosecurity Surveillance Network (NABSnet) introduction	Tom Couston, ABW, BQ
11.15	Northern Australia Coordination Network introduction	Ben Rhodes, Project Manager, Northern Australia Coordination Network (NACN), ABW, BQ
11.30	African Swine Fever (ASF)	Renee Thompson, ABW, BQ Remote presentation
11.50	Lumpy skin disease (LSD)	Rebecca Ambrose, ABW, BQ
12.10	Foot-and-mouth disease (FMD)	David Thomson, ABW, BQ
12.30	Lunch	
1.30	Disease investigation group scenario exercise	Joanne Mollinger, ABW, BQ Fiona Thompson, ABW, BQ Tom Couston, ABW, BQ Ben Rhodes, NACN, ABW, BQ Rebecca Ambrose, ABW, BQ Nina Kung, ABW, BQ
2.30	Forum discussion - Zoonotic diseases for veterinary practitioners in Queensland – anthrax, Brucella suis, Q fever, Hendra incl. variant	Joanne Mollinger, ABW, BQ Fiona Thompson, ABW, BQ Rebecca Ambrose, ABW, BQ Nina Kung, ABW, BQ
3.30	Afternoon tea	
3.45	Poultry diseases of concern	Nina Kung, ABW, BQ
4.30	Endemic pig disease in Queensland as differential diagnoses for emergency animal diseases	Kirsty Richards, SunPork
5.15	Close	
6.30 for 7.00	Dinner - Savoy Room, Rydges Southbank Townsville	Beth Cookson, Australian Deputy CVO

Day 2 – Saturday 12th August 2023 – Veterinary and Biomedical Sciences, JCU

Time	Title	Presenter(s)
7.45	Arrival and housekeeping	David Thomson, ABW, BQ
8.00	Entry/exit demonstration and practical	Tom Couston, ABW, BQ Bronson Logan, ABW, BQ
10.00	Morning tea	
10.30	Field necropsy examination and sample collection demonstration Field necropsy and sample collection practical	Jim Taylor, JCU Shirley Turner, BSL, ABW, BQ Tom Couston, ABW, BQ Bronson Logan, ABW, BQ Ben Rhodes, ABW, BQ
12.30	Lunch	
1.30	Brain extraction demonstration Poultry necropsy examination and sample collection demonstration Brain extraction practical Poultry necropsy examination and sample collection practical	As above
3.30	Workshop evaluation and close with afternoon tea	Bronson Logan, ABW, BQ

Appendix 2: Workshop 2 (Gatton, March 2024) program and info

Two-day workshop for southern Queensland veterinary practitioners

Day 1 – Friday 22nd March 2024 – Gatton Research Station, UQ

Time	Title	Presenter(s)
7.45	Registration with tea and coffee	
8.00	Introduction and housekeeping	David Thomson, Animal Biosecurity & Welfare (ABW), Biosecurity Queensland (BQ)
8.10	Welcome to UQ and UQ Veterinary Science Update	Prof. Nigel Perkins Head of Veterinary Science, University of Queensland (UQ)
8.30	Welcome Emergency animal diseases and the role of private veterinarians	Fiona Thompson Acting General Manager and CVO, ABW, BQ
8.50	Emergency animal disease outbreak response – Emergency Animals Disease Response Agreement (EADRA) and AUSVETPLAN	Fiona Thompson Director, Biosecurity Response Preparedness, ABW, BQ
9.10	National animal biosecurity programs	Joanne Mollinger, ABW, BQ
9.30	Endemic poultry diseases in Qld as differential diagnoses of EADs	Rod Jenner, consultant poultry veterinarian
10.15	Morning tea	
10.45	Significant, zoonotic and emergency animal disease diagnostic testing	Effie Lee, Biosecurity Science Laboratory (BSL), ABW, BQ
11.15	Endemic ruminant diseases in Qld as differential diagnoses of EADs	David Thomson, ABW, BQ
12.15	Endemic pig diseases in Qld as differential diagnoses of EADs	Kirsty Richards, company veterinarian, SunPork
13.15	Lunch	
14.15	Sample preservation, packaging and submission	Effie Lee, BSL, ABW, BQ
14.45	Disease investigation group scenario exercise	Joanne Mollinger, ABW, BQ David Thomson, ABW, BQ Shirley Turner, BSL, ABW, BQ
3.45	Afternoon tea	
4.00	Forum discussion - Zoonotic diseases for veterinary practitioners in Queensland – anthrax, Brucella suis, Q fever, Hendra virus, rabies, WHS, infection control & PPE	Joanne Mollinger, ABW, BQ David Thomson, ABW, BQ
5.00	Close	
6.30 for 7.00	Dinner – Presentations 1. Feral pig spatial modelling 2. Hendra virus as a model for viral spillover from bats	Dr Catherine Kelly PhD Dr Alison Peel PhD

Day 2 – Saturday 23rd March 2024 – Gatton Research Station, UQ

Time	Title	Presenter(s)
7.45	Arrival and housekeeping	Fiona Thompson, ABW, BQ
8.00	Biosecurity entry/exit demonstration and practical	Fiona Thompson, ABW, BQ Perry Jones, ABW, BQ
10.00	Morning tea	

10.30	Field necropsy examination and sample collection demonstration Field necropsy and sample collection practical	Shirley Turner, BSL, ABW, BQ Effie Lee, BSL, ABW, BQ Jonathan Lee, ABW, BQ Donna Webber, ABW, BQ
12.30	Lunch	
1.30	Brain extraction demonstration Poultry necropsy examination and sample collection demonstration Brain extraction practical Poultry necropsy examination and sample collection practical	As above
3.30	Workshop evaluation and close with afternoon tea	Fiona Thompson, ABW, BQ