



# Development and implementation of an accredited training program in animal health data collection

## Final Report APL Project 2017/2235

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### National Meat Industry Training Advisory Council

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## **Acknowledgements**

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## Executive Summary

The aim of this project was to prepare suitable training materials and a training strategy for a new unit of competency for inclusion in the AMP Australian Meat Industry Training Package, entitled '*Collect, monitor and analyse animal health data*', being developed by the Australian Industry and Skills Committee (AISC).

During this project, suitable training and assessment materials have been developed. In addition, a series of pilot and Train the Trainer workshops were held to facilitate the implementation of the new unit *Collect, monitor and analyse animal health data*.

The contract from Skills Impact to formally commence the process of development and endorsement of the new unit was received in September 2018, and work is expected to be completed by January 2019. The development of this unit was one of eight similar projects awarded by the AISC which are all being worked on concurrently and under the same contract. The input provided by the Heath 4 Wealth Committee comprised part of the development stage of the process and the national validation meeting for this unit will be held on 4 December 2018.

The training materials have now undergone several drafts. The current version of the materials is attached as Appendix 2. However, these will remain in draft until such time as the unit of competency is finalised, as there may be further adjustments to wording required.

Six state-based workshops were held during the first two weeks of October 2018, with a total of 65 attendees. In addition, shortened version of the workshops were presented at the Tasmanian Combined Network meeting and at the NSW Domestic meeting, with a total of 34 additional attendees. The nature of the audience group was very different at every location which meant that the material and approaches were tested with a wide variety of potential stakeholder groups. The diversity of background, experience and knowledge of the workshop attendees was invaluable to this project.

The most controversial area related to the statistical analysis component, where opinions ranged from suggesting that the material was far too simple to those who felt it was very challenging and complex. After review, we feel we have reached the 'happy medium', but we are taking the precaution of suggesting that anyone who undertakes the unit of competency should also do an Excel course of some description to ensure they are familiar with the capabilities of the software.

Two other items raised considerable discussion. The first related to the accuracy, and the verification of accuracy, of judgements made about the identification of diseases and conditions. The second related to the mechanisms for bringing data collected at ante- and at post-mortem, as well as condemnations, together in order to provide comprehensive and unambiguous feedback to producers.

The fact that many government-appointed meat inspectors will not collect animal health data remains unresolved.

As we progressed through these workshops, it became clear to MINTRAC that there are implications for meat inspector training programs. In the future there will need to be a far greater emphasis placed on the accurate and immediate recognition of diseases and conditions as well as the consistent application of standardised terminology. In the future, meat inspectors will be accountable for and may

be required to justify their decisions, especially when producers are making expensive production decisions based on the data received.

Finally, it also became clear that the inclusion of an animal health data monitoring responsibility to the QA function in a meat processing plant is a significant addition to the role. As processors adopt their own programs, the impact and resourcing requirements on the QA role needs to be seriously considered.

A tender by invitation approach was used for the development of the e-learning program and the successful tenderer was Management for Technology. Work is underway on the development of these materials, however they are not yet complete as progress has been hampered by lack of logos and style guide, the need to record some live footage and the need for additional photographs.

It is understood that under the wider Health 4 Wealth program, a series of plant trials are commencing. In the light of the discussion above, it is recommended that:

- close attention be paid to the impact on the QA role so that plants seeking to adopt an animal health data collection system in the future can adequately prepare for and resource the position
- further consideration be given to possible methods of verifying the accuracy of dispositions
- systems for bringing together all health data collected on plant be developed.

During the workshops it became clear that while there are Fact Sheets available on Livestock data Link for the sheep diseases and conditions, these do not exist in a similar form for cattle and pigs. It is understood that this is already being addressed by the Health 4 Wealth Committee. During this planned development the following is urged:

- a consistent style and format be adopted across all species so that the Fact Sheets are instantly recognisable and easily understood
- that emphasis be placed on seeking appropriate veterinary advice
- that a full range of Fact Sheets be made available as soon as possible, especially to those plants involved in the trials
- That mechanisms for the future review and updating of the Fact Sheets be put in place as part of the process.

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## **1. Background to Research**

The aim of this project is to prepare suitable training materials and a training strategy for a new unit of competency for inclusion in the AMP Australian Meat Industry Training Package, entitled 'Collect, monitor and analyse animal health data', being developed by the Australian Industry and Skills Committee (AISC).

Suitable training and assessment materials have been developed. In addition, a series of pilot and Train the Trainer workshops were held to facilitate the implementation of the new unit *Collect, monitor and analyse animal health data*.

## **2. Objectives of the Research Project**

The objectives of the project are to:

- develop a business case for a peri-mortem data capture and reporting system that meets the needs of stakeholders across the beef, goatmeat, pork and sheepmeat supply chains
- develop standards and software that can be used to collect and consistently report disease-related carcase and offal condemnations (total and partial) during ante and post-mortem inspection
- conduct validation studies to identify challenges or barriers to implementation and recommend solutions prior to rollout of the national system
- implement a national extension and adoption strategy to allow standardized data collection and reporting systems to be integrated into Australia's beef, goatmeat, pork and sheepmeat supply chains
- provide data to support on-going risk assessments of inspection procedures.

## **3. Introductory Technical Information**

Not applicable.

## **4. Research Methodology**

### ***4.1 Development of new materials***

MINTRAC has a standard template for the development of written meat industry Training and Assessment materials and this template was used as the basis for the development of the materials to support the proposed new unit.

Although there is a wide variety of industry materials already available which were relevant to this unit, additional research and development was required to:

- work with the committee to identify priorities
- write new material for sections where there was no pre-existing material
- gain copyright approval to reference and/or include pre-existing material
- identify feedback mechanisms for data flow to producers relevant to each state
- identify technical professional back-up opportunities
- convert highly technical material into the language appropriate for meat inspection, QA and plant management staff.

### ***4.2 Pilot Workshops***

Six, one-day pilot and Train-the-Trainer workshops were offered in each state with the specific purpose of:

- testing the accuracy and applicability of the materials within the context of data feedback subject to company, State DPI and industry body (e.g. MLA) requirements

- developing trainer capability to continue delivering the unit and materials at an acceptable and nationally consistent standard (trainers will include RTO staff, company trainers and State DPI trainers)
- developing a model of training which can be used into the future taking into account funding, availability of training and addressing the needs of “thin” training markets. This model will consist of a delivery structure (e.g. workshop, on-line course, distance education program) and supporting resources (Training and Assessment materials, PPT presentations etc)

#### **4.3 Development of an on-line e-learning training option**

Under this option MINTRAC:

- reviewed existing web-based training and assessment options and work with the committee to select the best platform to deliver the online training.
- worked with an IT provider to transfer the technical materials already developed to the online platform, including assessment tasks; this will include the modification of the program structure and training materials to suit an on-line learning environment
- developed a suitable assessment process to support on-line training
- trialled and validated the materials with a minimum of four users.

## **5. Results**

### **5.1 Development of the proposed new unit**

The contract from Skills Impact to formally commence the process of development and endorsement of the new unit was received in September 2018, and work is expected to be completed by January 2019. The development of this unit was one of eight similar projects which are all being worked on concurrently and under the same contract.

The input provided by the Heath 4 Wealth Committee comprised part of the development stage of the process and following this the unit moved into the public consultation phase which closed in mid-November. The unit had been provided in its draft form to the workshop attendees and several of those people have also been providing feedback. The national validation meeting for this unit will be held on 4 December 2018.

The consultation draft of the unit of competency is provided as Appendix 1.

### **5.2 Development of new materials**

The training materials have now undergone several drafts. MINTRAC staff wrote most of the material drawing on their own experiences of animal health data collection and meat inspection. However, we subcontracted the writing of the statistical analysis section to Andreas Keiermeister, a statistician who has worked closely with the South Australian Research and Development Institute.

The draft materials were tabled at the workshops and attendees were given some time during the workshops to review the materials and write comments directly onto them. They were also sent out to all attendees at the conclusion of the workshops and further feedback and comment was invited. The current version of the materials is attached as Appendix 2. However, these will remain in draft until such time as the unit of competency is finalised, as there may be further adjustments to wording required.

### 5.3 Pilot workshops

Dates for the workshops were:

Date	Location	Venue	Times	No. attendees
Tuesday 2 October	Melbourne	Best Western Motel, Attwood	8.30 – 4.00	20
Wednesday 3 October	Adelaide	Sage Hotel, South Park	8.30 – 4.00	11
Thursday 4 October	Perth	Country Comfort, Belmont	9.00 – 4.00	9
Tuesday 9 October	Brisbane	Colmslie Hotel, Morningside	8.00 – 3.00	15
Wednesday 10 October	Tamworth	Power House Motel, Tamworth	8.30 – 4.00	4
Friday 12 October	Wagga Wagga	Carriage House Motel, Wagga Wagga	8.30 – 4.00	6

In addition, shortened version of the workshops were presented at the Tasmanian Combined Network meeting on Thursday 8 November, and at the NSW Domestic meeting on Thursday 15 November.

The nature of the audience group was very different at every location which meant that the material and approaches were tested with a wide variety of potential stakeholder groups. A feedback sheet was distributed at every meeting (except Perth), and a summary of the collated feedback is included as Appendix 3.

A total of 65 people attended the full workshops, with a further 34 attending the shortened versions in Tasmania and NSW Domestic.

#### Workshop Program:

Time	Topic	Presenter
8.30	Welcome and introductions	MINTRAC
8.40	Introduction to the Health for Wealth program and the reasons for these workshops	H4W Committee
9.00	Overview of current animal health data collection across Australia	Clive Richardson
9.30	Recognizing diseases and conditions	Tom Collyer / Tony Bandera / Clive Richardson
<b>10.30</b>	<b>Morning tea</b>	
10.45	Collecting animal health data <ul style="list-style-type: none"> <li>• Paper-based</li> <li>• Voice recognition</li> <li>• Touch screen</li> </ul>	Clive Richardson Fiona Gojan
11.45	Verifying animal health data	Recorded webinar and discussion
12.15	Monitoring animal health data	Clive Richardson Fiona Gojan
<b>12.45</b>	<b>Lunch</b>	
1.30	Analysing animal health data	Recorded webinar and discussion



2.30	What to do with all the information collected <ul style="list-style-type: none"> <li>• LDL material</li> <li>• AHA material</li> <li>• APL material</li> <li>• Cattle material</li> </ul>	Jenny Kroonstuiwer
3.30	Models of training and the draft materials	Jenny Kroonstuiwer
3.50	Trial and validation - collection of EOIs	Clive Richardson
3.55	Closing comments	H4W Committee
<b>4.00</b>	<b>Afternoon tea and finish</b>	

#### **5.4 Development of an on-line e-learning training option**

A tender by invitation approach was used and the successful tenderer was Management for Technology.

Work is underway on the development of these materials and the link below shows progress to date. However, these materials are not yet complete as progress has been hampered by lack of logos and style guide, the need to record some live footage and the need for additional photographs.

<https://www.mintrac.com.au/online/h4w/login.asp>

User name: [JKroonstuiwer@mintrac.com.au](mailto:JKroonstuiwer@mintrac.com.au)

Password: jenny1

## **6. Discussion**

The diversity of background, experience and knowledge of the workshop attendees was invaluable to this project. Among the attendees were:

- University researchers
- Current meat inspectors
- Veterinarians
- H4W Committee members
- Trainers
- Department of Agriculture and Water Resources
- QA Managers
- Statisticians
- Plant managers (small plants)
- State DPI representatives
- People involved in the NSHMP
- People involved in current animal health data collection programs.

The most controversial area related to the statistical analysis component, where opinions ranged from suggesting that the material was far too simple to those who felt it was very challenging and complex. After review, we feel we have reached the 'happy medium', but we are taking the precaution of suggesting that anyone who undertakes the unit of competency should also do an Excel course of some description to ensure they are familiar with the capabilities of the software.

Two other items raised considerable discussion. The first related to the accuracy, and the verification of accuracy, of judgements made about the identification of diseases and conditions. While in one workshop it was strongly expressed that this was the role of the on-plant veterinarian and was therefore not an issue, this view was not fully supported in other workshops,

The second related to the mechanisms for bringing data collected at ante- and at post-mortem, as well as condemnations, together in order to provide comprehensive and unambiguous feedback to producers. As we went around Australia it became clear that very few plants have an established process for bringing all of the health data collected together, checking for consistency and coherence, and then packaging it into a single report for the producer.

The fact that many government-appointed meat inspectors will not collect animal health data remains unresolved. A couple of plants have indicated that they are using an additional company meat inspector/QA officer just for the data collection, and they work alongside the government inspectors. Those plants involved in the SHMP mostly do not use government meat inspectors and the one or two who do have access to the meat inspector employed by the NSMP program who visits the plant to collect the data.

As we progressed through these workshops, it became clear to MINTRAC that there are implications for meat inspector training programs. In the future there will need to be a far greater emphasis placed on the accurate and immediate recognition of diseases and conditions as well as the consistent application of standardised terminology. In the future, meat inspectors will be accountable for and may be required to justify their decisions, especially when producers are making expensive production decisions based on the data received. This shift in emphasis has been partially addressed in the 2016 versions of the qualifications which shifted to species-specific training, but there will need to be regular upskilling of current inspectors to ensure currency of knowledge and capability.

Finally, it also became clear that the inclusion of an animal health data monitoring responsibility to the QA function in a meat processing plant is a significant addition to the role. If processors are going to use this data to make stock purchasing decisions and establish firmer relationships with producers, then all parties need to have full confidence in the accuracy, consistency and value of the data being provided, and this will be the role of the QA Manager. Under the Sheep Health Monitoring Program, much of the QA verification is undertaken by MINTRAC and it involves a daily time commitment. As processors adopt their own programs, the impact and resourcing requirements on the QA role needs to be seriously considered.

## **7. Implications & Recommendations**

It is understood that under the wider Health 4 Wealth program, a series of plant trials are commencing. In the light of the discussion above, it is recommended that:

- close attention be paid to the impact on the QA role so that plants seeking to adopt an animal health data collection system in the future can adequately prepare for and resource the position
- further consideration be given to possible methods of verifying the accuracy of dispositions
- systems for bringing together all health data collected on plant be developed.

During the workshops it became clear that while there are Fact Sheets available on Livestock data Link for the sheep diseases and conditions, these do not exist in a similar form for cattle and pigs. It is understood that this is already being addressed by the Health 4 Wealth Committee. During this planned development the following is urged:

- a consistent style and format be adopted across all species so that the Fact Sheets are instantly recognisable and easily understood
- that emphasis be placed on seeking appropriate veterinary advice
- that a full range of Fact Sheets be made available as soon as possible, especially to those plants involved in the trials
- That mechanisms for the future review and updating of the Fact Sheets be put in place as part of the process.

## **8. Intellectual Property**

There are two items of intellectual property developed as part of this research:

- **The Training and Assessment materials**

At present the IP in these materials is listed as jointly belonging to MINTRAC and the H4W program.

The H4W Committee is urged to consider retaining this arrangement, because MINTRAC can then manage the distribution and permissions (under educational copyright arrangements) for use from Registered Training Organisations. In addition, this enables MINTRAC to add the materials to the six-monthly review and update process which applies to all of the training materials for units in the AMP *Australian Meat Processing Training Package*.

- **The e-learning program**

The e-learning program will be made available more widely than the training and assessment materials as it will provide a useful overview for people associated with an animal health data collection system, but not directly involved in the actual process, or wishing to undertake accredited training.

As with the Training and Assessment materials, the IP for the e-learning program is currently listed as jointly belonging to the H4W Program and MINTRAC. Once again, it is recommended that this be retained. MINTRAC has a process for reviewing annually all products and on-line programs under our management, and for instigating updates whenever necessary.

## **9. Technical Summary**

Not applicable.

## **10. Literature cited**

Not applicable.

## **I 1. Publications Arising**

The two publications are:

- the Training and Assessment materials
- The e-learning materials.

## **I2. Appendices**

- **Appendix 1:** Draft Unit of Competency (provided as a separate attachment due to differences in styles)
- **Appendix 2:** Draft Training and Assessment Materials (provided as a separate attachment due to differences in styles)
- **Appendix 3:** Summary of feedback from the workshops