

Smallstock Traceability Pilot Studies

Smallstock Traceability Pilot Studies - TPL Meat
Exports Pty Ltd

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1.0 Executive Summary

- **Better Product:**
 - Providing greater feedback for farmers/producers in reference to diseases and common carcass issues i.e. pleurisy, nephritis, grass seeds, parasites
 - By relaying this information back to farmers/producers, we are able to produce a better end product with less wastage, which in turn saves the company and farmer money by less trimming;
 - Less time repairing the carcass for sale, keeping a greater yield;
 - Keeping more of the offal due to provision of information to farmers to manage the welfare and improved diet of the animal on farm / feedlot.
- **Disease Traceability**
 - By using the RFID tags as a traceability source, we are able to determine if a common/exotic disease has started at one farm / feedlot, or has been inherited within transport;
 - Eg if foot and mouth disease is detected at the time of slaughter, by tracing RFID tag, and providing relevant information to PIRSA / Department of Agriculture, the process of traceability is enhanced by access of information from the original source, making this a much more time efficient and reliable form of identification, thus improving management of the outbreak.
- **Quality Control**
 - By using RFID tag system, we are able to obtain good feedback from customers on the quality of the end product, thus enhancing the quality of the finished product and relaying information back to the processors and the farm / feedlot, thereby going to the source of the issue. i.e. grass seeds can be reported back to the producer and the farm / feedlot to monitor pasture seed levels.

2.0 Introduction

AMIC has received funding from the Australian Government, through the Traceability Grants Program. The Grant has been successfully leveraged by industry co-funding from Australian Meat Processor Corporation (AMPC).

AMIC and AMPC will be allocating funding to finance a series of pilot studies.

It is AMIC and AMPC's aim that these pilot studies will examine the benefits of electronic Radio Frequency Identification Device (RFID) readers in sheep processing establishments, outside of Victoria.

The small, medium and large sheepmeat processors to participate in these pilot studies:

- WAMMCO International Katanning
- Dardanup Butchering Company
- Fletcher International Exports
- Gundagai Meat Processors
- Hillside Meat Processors
- Thomas Foods International

- TPL Meat Exports

The purchase and installation cost of the technology and software will be financed as part of the pilot studies.

The staged pilot studies are anticipated to create a better understanding of the additional benefits of RFIDs outside of NLIS compliance, including but not limited to:

- Supply chain integrity
- Compliance with market access requirements
- Better carcass selection for markets
- Animal health and biosecurity
- Provenance claims
- Raising claims
- Sustainability claims
- Advanced objective carcass measurement
- Integration of full carcass tracking systems
- Carcass yield feedback to producers, to facilitate adjustments in genetics

AMIC has completed a desktop research project, investigating the following:

- Average costing for equipment purchase and instalment
- Software requirements for processors

Data received from the pilot studies will be collated. These will be analysed, and outcomes and recommendations will be shared with broader industry.

3.0 Project Objectives

- Supply and installation of single walk through reader and associated infrastructure
- AMIC and AMPC will be allocating funding to finance a series of pilot studies
- It is AMIC and AMPC's aim that these pilot studies will examine the benefits of electronic Radio Frequency Identification Device (RFID) readers in sheep processing establishments, outside of Victoria

3.1 INSTALL PROCESS

- Clarity of instal requirements of readers to be attached to something other than metal was the first stumbling block in this project – not until partway through the installation did it become clear that additional plastic panels had to be purchased as the readers were not to be in contact with metal. Greater clarity and communication between the installer and understanding the limitations of the readers would have helped prepared for a smoother transition for installation. Not understanding this at the beginning, added an extra cost and works to the race which was not seen nor budgeted for.
 - After numerous conversations with the supplier, the instal process was an easy task after all requirements had been met. The system works flawlessly, and we have had no teething issues with programmes.

4.0 Methodology

Software requirements

In the case of TPL Meats, it will be necessary for our organisation to go to a Herd Management software to facilitate

automatic data collection and transfer into NLIS software. Due to the limited number of RFID tags within South Australia, transition to Hewrd Management software is not a cost-effective implementation at this stage.

5.0 Project Outcomes

The outcome of the project is to produce a better product from farmers to the customers. My aim is to make aware the issues that produce a lower quality product so that changes can be made at the farm to produce a better product.

I will use customer 1 as the example. We had 427 tags read and we had 38 with issues. Please keep in mind that we struggled to receive stock that had tags that read. We had 9 with Pleurisy, 27 with Nephritis and 6 with Arthritis. (4 of these had Nephritis and Pleurisy together.) As nephritis is a diet related issue the farmer can look at what water and feed is around that may cause these issues. Arthritis is also a manageable disease better welfare regarding stock helps this situation. Pleurisy is sadly a form of pneumonia that has got worse over time. This is still able to be managed by the farmer to prevent the issue but as weather also plays a part in this disease. I know that 38 out of 427 is a low percentage 6.56%, but as I said this is the only supplier, I have that has readable tags. They all came from the same farm and although symptoms of Pleurisy were not very advanced it is still a cause of heavy trimming. Heavy trimming causes weight loss and costs the farmer not the customer. The consumer in this case gets a heavily trimmed product that may look unappealing and be harder to use, therefore the product has lost value in weight and in preparation time to be utilised. Arthritis is also a bad one for weight loss and product loss. If the affected area is at the ankle the portion that needs to be removed is one joint higher (Knee) This is a loss of product for the consumers as they will be missing the shank from a leg roast. As Shops purchase on carcass weight the farmer/supplier loses as they have paid a live weight. In turn this cost more time to trim affected areas that slows production. The study itself will be good for traceability from farm to plate and will benefit the industry on a wider basis with the inspection process also. Being able to send data back to an individual farmer with detailed information regarding stock will only make the end product better.

6.0 Discussion

The results from my study provided a clear picture of some common issues that are easily maintained and some more advanced issues that were a little more involved. The standard issues you see here are grass seeds, Pleurisy, Arthritis and Nephritis. These are easy enough to relay back to the place of origin. Some were a bit more detailed with liver disease and had samples sent to Gribbles for analysis. This was a beneficial process but time consuming and waiting for results to pass the info on was slow.

7.0 Conclusions / Recommendations

As a whole, the idea behind the farm producing a better product is beneficial for the farmer/supplier and the customer. By giving the percentage of animals that have issues like Pleurisy the farmer can see what is causing the issue and how to remedy it in a timely and cost-effective manner. By producing a better product means less trimming less production time and less wastage. By providing farmers with the details of the stock they have delivered gives them some good feedback and supplies them with an average loss of product.

8.0 Bibliography

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9.0 Appendices

The pictures provided are of the installed system from AllFlex. It also shows the plastic panels you will need to attach the readers too. As metal interferes with the aerials you need a sturdy mounting point that is easy to clean and durable. I used 20MM white plastic with 300MM clearing each side of metal. This was not stipulated before install and was only picked up just before the Teck came to instal. You will also need a moxa 5110 for translation to computer.

9.1









9.2 Appendix



NX-M User Manual
1.00.pdf