Development of a system to improve offal recovery in beef at John Dee

Key points

Offal's are of significant interest to a number of Australia's export markets and can be a significant component of the processors profit margin.

Providing accurate offal defect feedback that assists producers to address husbandry practices could potentially lead to improved total carcase values.

The benefits of electronically capturing offal feedback include:

- Improved producer/ processor relationships

- Improved producer feedback

- Opportunity for payment adjustments based on offal quality

- Possible reduction in labour of offal data collection

- Increased offal defect reporting to AQIS and other reporting bodies

- Opportunity for improved husbandry practices to reduce defect levels

- Potential to increase the profitably of offal

- Improved offal volume planning by lower rejects rates

- Potential to increase sales to key export markets by improving compliance to specifications

- Improved industry knowledge on offal defect incidents and likely cause

This approach continues to encourage between communication between the processing and production sector and identify areas of lost value with mutual benefits.

Case study

The Meat and Livestock Australia (MLA) and Australian Meat Processors Corporation (AMPC) project with John Dee was focused on continuing to develop the company's relationships with suppliers in order to improve the efficiency and value adding potential for all parties involved.

Carcase offals provide an indication of the health of the animal particularly with regard to sub-clinical infections which interfere with the animals live weight gains but show no external signs. This project focused on the development of a data capture system for use by abattoir management and suppliers to enable modification of management programs to improve compliance levels.

The objectives of this project were to:

1. Implement a system that allows offal components to be traced to individual carcases and livestock.

2. Implement a two-way feedback system to facilitate the transfer of information between John Dee and producers

3. Identify causes of adverse liver quality and opportunities to improve the value of this edible offal.

4. Liaise with AQIS' inspectors to implement a system that enhances their role.

Background

Offal sales represent a valuable source of income for processors and offer beneficial opportunities to value add to carcases. However, to date there have been incidents of high rates of condemnations. (up to 60%).

An efficient feedback system will enable on farm production efficiency to be improved through better animal health management leading to improved offal quality and the ability to pack and market increased product.

Essential features

The establishment of benchmarks to identify the current extent of wastage of the various offals is essential to a future recognition of the benefits and effectiveness of any investment. The implementation of the National Livestock Identification System (NLIS) provides an additional platform for recognition of 'property of origin' and thereby traceability of livestock following clinical and subclinical disease conditions reported in the abattoir.

A collective desire by both the processor and producer to improve health of the cattle and reduce offal wastage / condemns is essential to an effective reporting system. This can provide a win-win situation for each party in the supply chain. The adoption of technology including robust harsh environment hardware in association with an electronic data capture system compatible with the abattoirs software is essential. Staff employed in the abattoir are also a key component. Their accurate identification of the disease conditions related to body number / NLIS number as well as their willingness to electronically capture the data is paramount to an effective system.

The process implemented involved discussions with the three core parties (AQIS inspectors, abattoir management and suppliers) to establish protocols for the system to be effective.

The key attributes of the system for the different parties are:

AQIS inspectors
- Quick entry of data so as not to interfere with required duties
- Ease of use
- Design to fit within the confines of the kill floor

Abattoir management
- Data input stations must fit into the current slaughter floor layout
- Data input with touch screen technology to minimize interruption of current work
- Ability to collect data on individual animals and link with current data base

- Ability to incorporate with current feedback information
- Data must be supplied back to the producer in a manner that is meaningful and encourages some change of practice if necessary
- Ability to potentially in time, incorporate rewards and discounts into the payment system

Suppliers
- Information must be provided both individually and as a group to allow application of information according to the individuals requirements
- Information can be provided electronically

Linkage to beef producers

In this project beef producers were surveyed from the areas corresponding to the source of the cattle used in the trial. The majority of producers surveyed indicated a preparedness to utilise the feedback information. Ninety three percent of the producers in the south use feedback information compared to 65% in the north.

Producers make the most use of feedback information on fat (77%), carcase weight (60%), meat colour (57%), marbling (43%) and fat colour (34%), with the other traits of lower importance. Ninety-seven percent of producers indicated they would use feedback on animal health if it was provided and that this information would be useful if provided individually (57%) or by lot (49%).

50% of producers in the north and 87% in the south had a preference for the information to be presented electronically.

Results

Cattle drawn from northern New South Wales and southern Queensland were used in the project. These animals represented both pasture finished and feedlot finished cattle. Over the life of the project, 2044 carcases were recorded. The key information collected included:

- 54% of carcases recorded had some offal component/s condemned
- The main causes of lung non-compliance is pleurisy (9%), parasites (4%) and hydatids (3%)
- The main cause of liver non-compliance has been liver fluke (17%) and abscesses (10%).

In addition to the pathogenic causes of wastage, the reporting system enables the processor to document

any issues they have control over and where necessary implement retraining.

The provision of information does not imply adoption of the feedback information by beef cattle producers.

Such information should be supported by an associated explanatory system whether it be initially and extension activity or as part of the abattoirs purchasing and marketing programme.
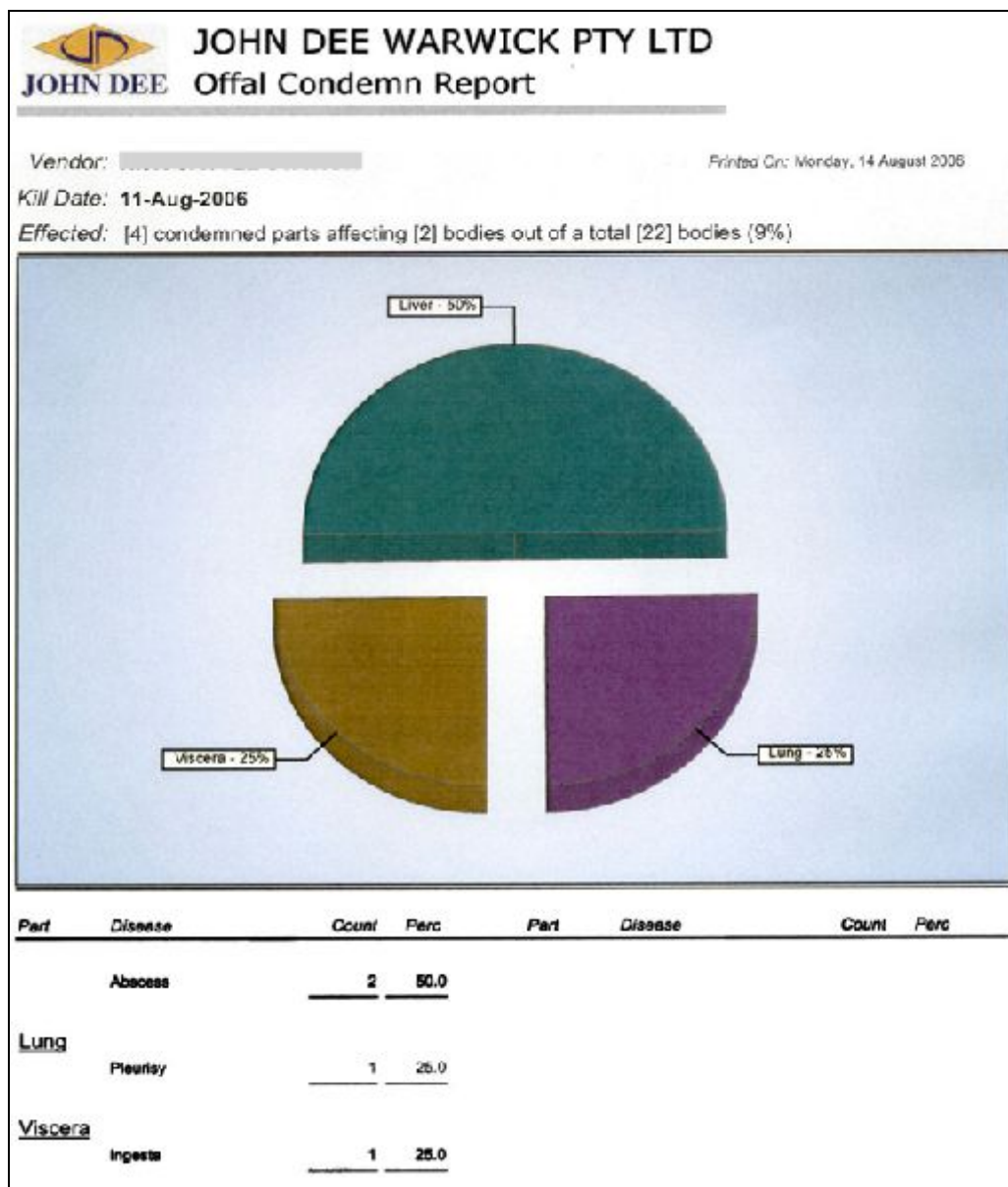
Conclusions and Recommendations

The collection of data on offal non-compliance rates and reasons for condemnation has progressed to provide a useable system for the projects three main clients - John Dee, the AQIS inspectors and producer suppliers.

The implementation of the feedback system will be ongoing.

Opportunity exists for the implementation of closer relationships between the broader network of John Dee producer suppliers and management changes / opportunities available to them to capitalise on this data capturing system.

Initially, the provision of 'fact sheets' through the web and identified / linked to the email reporting of animal performance could partially overcome knowledge gaps for changes in on farm practices.

An example of the producer feedback

JOHN DEE WARWICK PTY LTD
JOHN DEE Offal Condemn Report

Vendor: _____   Printed On: Monday, 14 August 2006

Kill Date: **11-Aug-2006**

Effected: [4] condemned parts affecting [2] bodies out of a total [22] bodies (9%)

Liver - 50%
Viscera - 25%
Lung - 25%

Part	Disease	Count	Perc	Part	Disease	Count	Perc
	Abscess	2	50.0				
Lung							
	Pleurisy	1	25.0				
Viscera							
	Ingesta	1	25.0				

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Acknowledgements