AMPC/Sheep CRC/MLA Case Study

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Sheep CRC Lean Meat Yield and Supply Chains Project

The CRC Meat Science Program aims to develop new technology and knowledge to underpin lean meat yield improvement of high quality lamb and sheep meat for domestic and international consumers.

Objectives

The objectives of this project are to simultaneously increase lean meat yield (LMY), eating quality (EQ) and nutritional value of lamb meat to consumers. Figure 1 outlines the process to achieve this outcome.

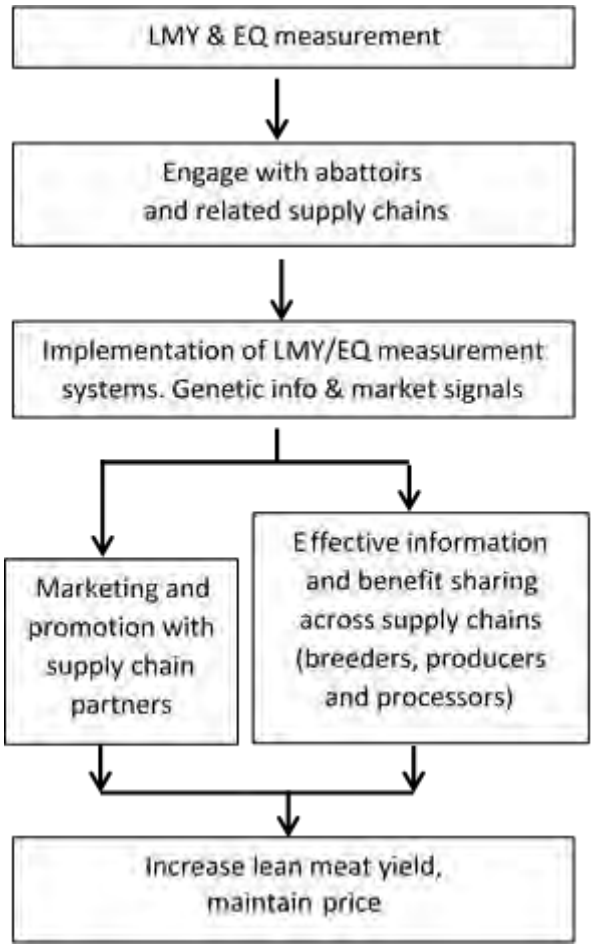

Figure 1: Process towards LMY & EQ Outcome.

Method

The Lamb Supply Chain Group (LSCG) is a collaborative venture involving the Sheep CRC, Meat and Livestock Australia (MLA), State DPIs, Universities and industry.

The group is developing the underpinning platforms to measure and value lean meat yield, which has initially resulted in a focus on more precise fat measurement.

Background

LMY and EQ are potential profit drivers within lamb supply chains, driving on-farm efficiency and reducing wastage and new product innovation at processing.

Lean meat yield percentage (LMY%) *is the amount of lean meat that can be boned out from a carcase and is displayed as a percentage of carcase weight.*

Eating quality (EQ) *is higher from progeny of sires with high intramuscular fat and low shear force (higher tenderness) breeding values.*

Determining lamb LMY% is valuable for processors. While LMY% and EQ parameters have proved to be difficult to measure at chain speed, there are a number of methods used to predict LMY% and EQ with varying accuracy.

Outcomes for processors

Engagement with the LSCG is proving a key route to delivery of LMY and EQ outcomes.

The LSCG is assisting plants to quantify the economic value of implementing processing changes designed to enhance LMY and EQ and capture their benefit in their business.

This service has resulted in improvements in boning decisions, enhanced producer feedback delivery and superior lean meat yield carcasses.

Outcome for producers

Further work is now underway to develop new carcase payment schedules to reward lean meat yield and enhanced feedback systems to better inform prime lamb producers of their carcase compliance rates.

Value proposition of outcomes

Identifying appropriate in-plant LMY measurement technologies could increase value by up to $10 per lamb carcase, depending on the ease and degree of fabrication or retro-fitting to existing processing plants.

Additional opportunities, which have the potential to create value within specific areas of a business, include growing the quantity and quality of lamb produced, developing better relationships through reliable feedback across the supply chain, exposure to the latest research in technology and process changes, tapping into the value of lean meat yield, and other areas of interest.

How do AMPC members get involved?

Members of the LSCG engage with supply chains that express the interest to explore improvement in their supply chain efficiency. This is done via a focus on LMY, EQ, feedback, value-based payment systems, development of relationships, provision of quality training or development of their lamb suppliers.

Various activities of engagement and development include:

- Engagement workshop and collaborative meetings
  Exploring what the future looks like, opportunities that would like to be captured, the gaps, and an action plan to commence the journey.

- Plans of action
  Developed in conjunction with plants to make business changes. Examples to date have included developing LMY measurement and payment grids, accurate measurement of fat, new carcase measurement technologies, optimising and defining the specification, development of feedback systems and solutions to feedback, benchmarking (past and current), in-house training, engaging in industry development initiatives, and participation in the collection of data from lambs in the LMY and EQ Producer Demonstration Sites (PDS).

- Supply Chain Officers
  Some action plans have required the services and development of a Lamb Supply Chain Officer to bring a meat science skill-set into the team, and provide the manpower to initiate and enact the plans.

  They coordinate the integration of in-house training requirements in meat science, MSA, genetic selection and carcase measurement technologies.

  They assist in the determination of a LMY focus and determine the value proposition via the use of the Lamb Value Calculator tool.

- Training and development of lamb suppliers
  Some supply chains have identified current industry training programs that align well with the skill-set they believe are essential in their future suppliers. The Supply Chain Officers have been conduits and champions for workshops, forums and training courses such as:
  - LambEx 2010, 2012 and 2014
  - Live lamb assessment
  - Bred Well-Fed Well (BWFW)
  - Lifetime Ewe Management (LTEM)
  - RAMSELECT
  - Cost of Production (CoP)
  - Meat Standards Australia
  - Winning Against Seeds.

Further information

For further information refer to the Measuring Lean Meat Yield: Current and Future Technologies fact sheet.

Disclaimer