Final report

Gundagai Meat Processors Collaborative Innovation Program Manager

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Executive summary

Background

The Collaborative Innovation Program at Gundagai Meat Processors (GMP) consisted of four pillars as listed below. The focus of the program was to support the implementation, validation and commercialisation of objective carcase measurement technologies, and a value-based marketing (VBM) system for lambs at GMP. It is a first for industry, paving the way for objective carcase measurement feedback and value-based marketing to create a competitive edge for the Australian Sheepmeat Industry.

1. Implementing Dual Energy X-ray (DEXA) and Meat Standards Australia (MSA) to support carcase sorting.
2. Validating and commercialising DEXA / MSA.
3. Developing and embedding a VBM system at GMP.
4. Exploring supply chain differentiation options.

Objectives

The following objectives to be achieved through the project include the following.

1. Implement the innovation strategy as agreed under the key project pillars.
    a. Implementing DEXA and MSA to support carcase sorting.
    b. Validating and commercialising DEXA / MSA.
    c. Developing and embedding a value-based marketing system at GMP.
    d. Exploring supply chain differentiation options.
2. Efficiently deliver projects in accordance with budgets and timelines.
3. Submit reports and project communication outcomes to MLA in accordance with MLA's style guide and report guidelines.

Results/key findings

This project was able to successfully implement DEXA, validate DEXA and other objective carcase measurement technology and implement a value-based marketing strategy with the Gundagai Lamb supply chain. Providing advanced feedback to producers, along with paying them for what they are producing, ensures producers are rewarded for their quality lambs, and gives clearer market signals regarding what they should be producing.

Benefits to industry

The Gundagai Lamb brand has been able to demonstrate the successful implementation of objective carcase measurement technology, and a value-based marketing strategy. The benefits to producers when using an objective system that is fully transparent, builds trust between the producer and processor, and provides clear indicators to producers of the type of product they are producing. It is important to value the relationships between the producer and processor to ensure a successful outcome for the consumer.

Future research and recommendations

Further work is currently underway regarding embedding MSA into GMP systems. This is the next step in ensuring high quality product is falling with MSA accreditation standards. Additionally, with the provision of further feedback and insights provided to producers, it is important to continue to develop the relationships that exist between producers, including the analysis of feedback and data and how the large amount of data that is generated at GMP can be used to its full extent.

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1. Purpose and description

The focus of the program is to support the implementation, validation and commercialisation of objective carcase measurement technologies and a value based marketing system for lamb at GMP. The program will pave the way for objective feedback and value-based marketing to create a competitive advantage for the Australian sheepmeat industry. The project will follow the four project pillars as given below.

- Implementing DEXA and MSA to support carcase sorting.
- Validating and commercialising DEXA / MSA.
- Developing and embedding a value base marketing system at GMP.
- Exploring supply chain differentiation options.

The duration of this program for the development and implementation of the Collaborative Innovation Program was determined to be three years.

The joint project team responsible for developing and implementing the broader Co-Innovation strategy includes the following.

- GMP – CEO, Will Barton.
- GMP – Innovation Manager, Dr Michelle Henry.
- MLA – Relationship Manager Value Chain.
- MLA – Program Manager – Innovation Capability.
- MLA – Program Manager – MSA.
- MLA – Program Manager – Objective Measurement.
- MLA – Project Manager – Supply Chain Data.

The joint steering group overseeing the program and Innovation Manager comprised of;

- GMP – CEO, Will Barton.
- GMP – Dr Michelle Henry.
- MLA – Program Manager – Innovation Capability and Relationship Manager Value Chain.

2. Objectives

The following objectives to be achieved through the project included the following;

- Implement the innovation strategy as agreed under the following key project pillars.
    - Implementing DEXA and MSA.
    - Validating and commercialising DEXA / MSA.
    - Developing and embedding a VBM system at GMP.
    - Exploring supply chain differentiation options.
- Efficiently deliver projects in accordance with budgets and timelines.
- Submit reports and project communication outcomes to MLA in accordance with MLA's style guide and report guidelines.

In addition to individual project reports as required, the Innovation Manager will provide a quarterly report to the Steering Group which details the following.

- Summary of progress of all R&D/innovation projects underway.
- Update on each of the broad areas of focus within the overall Innovation Strategy.

- Details of baselines, measurement systems, and progress regarding key performance indicators related to the key business objectives detailed above.
- Specific details on change management initiatives underway.
- Specific details on implementation of the Innovation Strategy in relation to the key areas included in the Innovation Strategy.
- Activities proposed for next quarter.
- A final report and industry communications will be provided at the conclusion of the program (in line with the project's communications plan), detailing overall progress against agreed goals and benefits of the program to the funding parties.

3. Program initiatives and KPI table

The following table shows each of the four pillars focussed on in this project, along with a list of initiatives to be achieved under each pillar.

Focus area	**Carcase sortation and optimisation – driving value from DEXA and MSA**	**Validate and commercialise MSA for Lamb**	**Develop VBM for lamb**	**Supply Chain Differentiation**
Initiatives	• Assist in the further development of the carcase optimisation tool. • Determine the output of optimised sortation scenarios. • Develop new systems to bring together optimised sortation with 'real world' practical chiller constraints. • Run real world sortation scenarios based off the results produced by the carcase optimisation tool. • Measure and determine the outputs of running 'real world' optimised sortation	• Validate technologies required to enable MSA for lamb and VBM at GMP. • Embed lamb MSA and carcase measurement systems across plant. • Benchmark supply chain in conjunction with MSA model roll out. • Determine grades and percentage of product falling into grades using VBM data. • Workshop with strategy experts to review how potential product claims align with draft brand strategy. • Workshop with brand experts	• Develop a strategy for VBM at GMP given technology outputs. • Develop and / or enable integration of MSA feedback with other carcase feedback and data e.g. animal disease. • Support producers in understanding VBM and lamb eating quality through education initiatives. • Work with producers to ensure there is a feedback / feedforward system in place. • Determine the best way to engage with	• Review the benefit of implementing farm assurance type systems i.e. welfare, sustainability, production claims that align with brand strategy and differentiate the GMP offer. • Explore brand and / or market opportunities based on eating quality. • Review the benefit of enhanced feedback / feedforward systems. i.e. Yield prediction and or optimisation of carcase fabrication based on size, quality, yield.

	scenarios through GMP. • Work through any issues or improvements associated with optimised sortation. • Depending on outcomes of 'real world' optimised carcase sortation, imbed optimised carcase sortation into GMP systems.	and marketing team at GMP to develop a brand strategy that aligns with GMP ethos and creates a point of difference for the business. • Work with marketing teams to test brand concepts.	producers when implementing VBM and novel feedback. • Rank suppliers on quality and value. Decide how to engage and manage these tiers.	

3.1 Outcomes

3.1.1 Carcase sortation and optimisation

This pillar is centred around carcase sortation and optimisation with a focus on the following;

- Assisting in the further development of the carcase optimisation tool.
- Determine the output of optimised sortation scenarios.
- Develop new systems to bring together optimised sortation with 'real world' practical chiller constraints.
- Work through any issues or improvements associated with optimised sortation.
- Depending on outcomes of 'real world' optimised carcase sortation, imbed optimised carcase sortation into GMP systems.

This objective was able to be met by running scenarios through the carcase optimisation tool whilst ALMTech was still operational during the timespan of the project. However, at the completion of ALMTech and subsequent results in relation to scenario outcomes, optimised carcase sortation was not embedded within GMP systems and additional work areas were included within this pillar. These additional work areas included the move to the Aus-Meat Accredited DEXA algorithm within the Gundagai Lamb supply chain. Included in this new area of work was the data analysis that was undertaken to change the DEXA brackets within the Gundagai Lamb value-based marketing grid. Work in this area is ongoing to ensure that the new grid brackets continue to perform as required.

3.1.1.1 Achievements

The achievements associated with the carcase optimisation tool included the following;

- A large piece of work was undertaken to validate the cut weights that were developed for the lamb value calculator to ensure they were reflective of the cut weights that were produced out of the GMP boning room. This piece of work was critical to the accuracy of the carcase optimisation tool due to different boning rooms undertaking different

cutting and slicing lines, and level of trim for different products. This was an ongoing piece of work undertaken in the GMP boning room and with ALMTech.

- Attendance at several meetings and workshops was undertaken to work with the ALMTech team to ensure that the boning room cost calculation was undertaken in an accurate manner.
- A range of scenarios were run by ALMTech and the Co-Innovation Manager to determine the value of optimised sortation of carcases. This included the re-development of the carcase optimisation tool to allow for bulk sortation. Additionally, there was a lot of work that was undertaken to ensure the range of constraints were considered. These constraints ranged from carcase weight, DEXA lean percentage, carcase quality, and the number of cut outs in the cut plan. It was found there was a benefit to undertaking carcase sortation using the carcase optimisation tool if the range of real-world constraints could be overcome.
- Seven days' worth of Gundagai Lamb data was sent to ALMTech to represent a typical boning cut out for the week, along with an example of the types of carcases processed. This allowed for more in depth analysis to compare the predicted yield of each cut using the lamb value calculator in comparison to the actual yields achieved to determine the value of carcase optimisation, along with the accuracy of the cut weight calculations.
- Real-world constraints that were detected included challenges such as;
    - Overall chiller space, and the associated limitation on the number of sortation decisions that could be made.
    - Ensuring that all rails were filled with carcases to utilise the overall chiller space. Half empty rails would result in a shortfall in chiller space.
    - The use of chiller space when other constraints were put in place, such as the requirement for spare rails between product based on raising claim status.
    - Cleaning rotations in chillers, introducing another space constraint.
- Gundagai Lamb did begin sorting carcases based on the Gundagai Lamb Quality scoring system. This ensured that product that was being paid a premium was able to be sorted within the chillers, creating boning runs for premium versus everyday product. This was combined with sortation decisions based on the weight of the carcase, and therefore, the weight of specific cuts.
- Whilst sortation decisions were being made in the chillers to ensure carcase optimisation was being achieved from a value-based marketing approach, the application of business rules in relation to the Gundagai Lamb Quality score system, and in relation to DEXA and intramuscular fat data were developed. The application of these business rules was initially undertaken manually whilst undertaking the preparation of feedback and payment to producers, and gradually moved to a more automated manner within GMP systems.
- The Co-Innovation Manager attended the final ALMTech meeting at Q Station in Sydney in May of 2023, and undertook a presentation in relation to the work undertaken on carcase optimisation and cut weight validation work.
- Work within this pillar shifted to embedding the Aus Meat accredited DEXA algorithm into the DEXA unit at GMP. The algorithm used previously was a site specific GMP algorithm, unfortunately there was a shift in data that occurred with the use of the new

Aus Meat accredited DEXA algorithm, which required the following work to be undertaken,

- The Value-Based Marketing lean meat yield grid categories used within the Gundagai Lamb supply chain were adjusted to reflect the shift in values. This was a large piece of work undertaken over months in time.
- The GLQ score calculation was adjusted to ensure the shift in DEXA lean meat yield values were accounted for.
- The shift to the Aus Meat accredited algorithm was undertaken at the same time as the GLQ score calculation. The timing of this was extremely important, with the additional time allowed to ensure data quality could be checked.
- The move to the Aus Meat accredited algorithm was a well-planned change within the supply chain to ensure that producers and livestock agents were aware of the change occurring, what this meant for them, and how to interpret their feedback.
- Work in relation to the grid categories is currently ongoing, to ensure that the new categories are encouraging a carcase type that is ideal for the Gundagai Lamb supply chain.

3.1.1.2 Future recommendations

An extremely important step for any supply chain or processor using DEXA data is to ensure that they understand the value of such data and how it may be used within their supply chain. Carcase optimisation is one method of extracting value from DEXA that ensures the carcase is sorted in the most profitable manner, and that the customer is receiving the product they are expecting. There are a range of real-world challenges that can arise and create roadblocks to using the data in this way, and as such, each processor will have their own challenges and use for the data. Tools such as the lamb value calculator are integral to ensuring the data generated by a DEXA can be used to its full extent, however, it is important to ensure that any cut weight predictions are adjusted for each processing plant. Future recommendations for further work in this area includes the continual work to ensure that carcases falling into each category of the Gundagai Lamb grid are the right types of carcases to ensure that any further changes to the grid categories are well thought through, easy to communicate, and result in the correct carcases being rewarded.

3.1.2 Validate and commercialise MSA for lamb

This pillar covers the validations and commercialisation of MSA for lamb. Included in this pillar were the following focus areas;

- Validation of technologies required to enable MSA for lambs and VBM at GMP.
- Embed lamb MSA and carcase measurement systems across plant.
- Benchmark the supply chain in conjunction with MSA model roll out.
- Determine grades and percentage of product falling into grades using value-based marketing data.
- Develop a brand strategy
- Work with marketing team to test brand concepts.

There were notable funding challenges to deliver a fully embedded MSA grading system into GMP systems during the project timeframe

3.1.2.1 Achievements

The achievements associated with the validation and commercialisation of MSA for lambs include the following;

- Work with the MEQ team was ongoing to ensure that the trait, intramuscular fat, and the device to measure intramuscular fat could be accredited. Intramuscular fat was accredited with the MEQ probe used to measure at GMP.
- It was hoped that the MSA algorithms would be embedded into GMP systems during this project, unfortunately this did not occur due to unsuccessful funding and the amount of resourcing required to ensure that this could occur. There were a range of meetings and discussions which took place to determine the pathway forward throughout this process.
- A more manual process of sending data to the MSA team to undertake the grading outcomes for Gundagai Lamb carcases was undertaken, however, this was a manual process which did require significant resourcing.
- Gundagai Lamb worked closely with MLA to deliver a MLA / MSA showcase day at GMP on March 30, 2022. This day was a chance to highlight how Gundagai Lamb has brought all of the technologies together and is using them along the supply chain to give advanced feedback to producers and differentiate product into premium and graded product. It was an extremely successful day with MLA represented by the Managing Director Jason Strong, Program Manager Sheep and Goat Productivity Richard Apps, and Corporate Affairs and Media Manager Jack Johnston. Gundagai Lamb producers were a key part of the day and generated some fantastic discussion during the producer question and answer session. Media representatives were invited to attend to highlight the achievements that have been made through MLA and industry support at GMP.
- GMP and MSA undertook a large amount of work to submit a funding application through a large Rural Investment Activation Fund (RIAF) project. A significant amount of work was undertaken to prepare the first-round application by GMP and MLA. Further work was ongoing with MDC applications for each project in conjunction with MLA. In relation to MSA, this work was undertaken with the MSA team and Triton to determine the cost of embedding MSA into GMP systems. Unfortunately, the outcome of the RIAF funding was unsuccessful.
- Further meetings were undertaken with a range of stakeholders, including the Fight Food Waste CRC to determine their interest in becoming part of a MSA commercialisation project. Unfortunately, this pathway to funding was unsuccessful.
- Additional work was undertaken between GMP and MLA / MSA to determine a MDC pathway to funda project to commercialise MSA at GMP, along with a 5 year long term practice change project for producers and livestock agents. This project was successfully funded and is being completed currently.
- There is still some interest from the Fighting Food Waste CRC and the University of Adelaide in relation to a project that encompasses a greater body of work with Gundagai Lamb producers.

3.1.2.2 Future recommendations

The pathway to embedding MSA within GMP systems has been a long process to determine a possible funding pathway. A more simplified approach to embedding MSA into company systems would remove some of the barriers to adoption. Further work is continuing with Fight Food Waste CRC and the University of Adelaide to boost the work being undertaken within the Gundagai Lamb supply chain further.

3.1.3 Develop value-based marketing for lamb

This pillar covers the development of value-based marketing for lamb within the Gundagai Lamb supply chain. This pillar included the following focus areas;

- Development of a strategy for value-based marketing at Gundagai Lamb given technology outputs.
- Development and / or enable integration of MSA feedback with other carcase feedback and data (for example animal disease).
- Support producers in understanding value-based marketing and lamb eating quality through education initiatives.
- Work with producers to ensure there is a feedback / feed-forward system in place.
- Determine the best way to engage with producers when implementing value-based marketing and novel feedback.
- Rank suppliers on quality and value. Decide how to engage and manage these tiers.

3.1.3.1 Achievements

The achievements associated with the development of value-based marketing for lamb include the following;

- The Gundagai Lamb grid did change over time, paying producers on hot standard carcase weight, lean meat yield (with reference to fat score), and a bonus for intramuscular fat percentage. The bonus was paid to producers if intramuscular fat reached a level of 5% or higher.
- The Gundagai Lamb grid made a change to how it paid producers by moving from paying a premium based on intramuscular fat over 5%, to paying a premium based on the Gundagai Lamb Quality Score (GLQ Score). In the case that the GLQ Score reached a level of 5 or higher, a premium was applied. This premium increased from $0.50/kg to $0.80/kg.
- Engagement with producers was continual throughout this project to ensure that they had a good understanding of the grid, where their lambs may sit within the grid based off live animal assessment (using weight a fat score as a proxy for lean meat yield), and an understanding of their feedback.
- A series of profitable grazing systems workshops, supported by ALMTech were held at Gundagai Meat Processors with a group of 10 producers during December of 2021. This workshop was facilitated and run by a local livestock consultant. These workshops gave the producers in the group the tools to understand more about objective carcase measurement, help build their skills in live animal assessment and ensured that producers understood their feedback.

- As part of the objective to ensure producers were supported in their feedback, a Gundagai Lamb Producer Portal was developed and launched within their pillar. This producer portal applies basic data analytics, enables producers to visualise their feedback in the form of a range of figures, and allows for producers to benchmark against the rest of the Gundagai Lamb supply chain.
- A large piece of work has been ongoing each year to undertake data analysis exercises for the Gundagai Lamb brand. This enables a greater learning for the Gundagai Lamb team in relation to the livestock purchased, and for the calculation of Gundagai Lamb producer event awards.
- A range of livestock agent engagement days were completed throughout this project. These days were awareness raising activities where a group of agents would come on site and hear a presentation on Gundagai Lamb and go for a tour of the plant.
- A range of animal health focus days were undertaken with Zoetis and Virbac on site at GMP with producer groups. These days were focussed on giving producers insight into the most common diseases and defects that are found in the processing plant, ways that they can manage, treat, prevent, or treat these diseases and defects, what they look like in the plant, and the impacts they have on the plant.
- A large MDC project was developed with MLA and MSA to ensure GMP could embed MSA into plant systems and generate outcomes for feedback to producers. The other large aspect of this project is a 5 year project designed to support the engagement activities required to support on farm practice change for Gundagai Lamb producers.
- The Pioneer's Program was formed from a group of highly engaged producers making changes on farm that had expressed an interest informing a collaboration. The group meet 2-3 times per year and are given access to expertise in a range of areas from genetics, meat science, pastures, and animal health.
- A range of presentations have been given over the three-year period to raise awareness and educate the wider audience in relation to Gundagai Lamb. These engagements have ranged from presentations to breed associations, livestock agents, animal health companies, conferences, industry events, and virtual producer events.
- Work to enhance feedback for producers included the installation of an EID panel reader at GMP. This work is ongoing to pair individual EID numbers back to individual carcases.

3.1.3.2 Future recommendations

Ongoing work in this area is required to continue the embedding of MSA into GMP software systems and the long term practice change project. There will be a range of producer and livestock agent engagement activities that will continue to be rolled out over the next 5 years to ensure that producers and livestock agents are well educated in how to comply with Gundagai Lamb specifications at a higher rate, and to produce a lamb that is higher yielding whilst having high eating quality characteristics. This work will continue with the investigation into new traits that could be measured in plant and how new information can be supplied to producers in the future.

3.1.4 Supply chain differentiation

This pillar covers a range of different parameters regarding supply chain differentiation. The pillar included the following focus areas;

- Review the benefit of implementing farm assurance type systems, i.e. welfare, sustainability, production claims that align with brand strategy and differentiate the Gundagai Lamb offering.
- Explore brand and / or market opportunities based on eating quality.
- Review the benefit of enhanced feedback / feed-forward systems. i.e. Yield prediction and or optimisation of carcase fabrication based on size, quality, yield.

This pillar was expanded to include a range of other areas in supply chain differentiation.

3.1.4.1 Achievements

The achievements associated with the supply chain differentiation pillar include the following;

- Exploration into the use of a grass-fed program for Gundagai Lamb was undertaken as part of this pillar. This raising claim was then shifted to include free range, antibiotic free, and growth promotant free lambs. A large piece of work was undertaken for the development of a standard operating procedure, along with approval of labels by the USDA, establishing a process for producers declarations, and a second party audit system.
- The establishment of product differentiation based on eating quality was reported within this market as growing over the three-year period. This process included sending samples to customers domestically and internationally, providing market access education and strengthening Gundagai Lamb's penetration within these markets.
- Work was undertaken with Trust Provenance for the establishment of a traceability platform. The platform allowed for differentiation within markets by providing consumers with a QR code on product where they could see the region their product came from, the average daily GLQ score,, and feedback received by the Gundagai Lamb supply chain when a consumer scanned a QR code, their location and any feedback they had for the brand. The level of information given within the QR code is a differentiation for the Gundagai Lamb brand, as this level of information is not given in the general marketplace in relation to lamb products.
- Work was undertaken with Aus Meat and the Language and Standards Committee to request a consideration of an alternative to the definition of free range. Currently there are no exceptions allowed with the Aus Meat approved definition, however there are exceptions allowed for the grass-fed definition of which during harsh environmental conditions (such as during drought) lambs can consume feedstuff other than grass. The request put forward for consideration was to include the ability to sell market lambs as free range during adverse environmental conditions such as during drought when drought lots may be used to feed lambs. This request was declined by the Language and Standards Committee.
- The Gundagai Lamb brand have begun investigating the measurement of eye muscle area within the boning room using the MEQ camera. This project is still in its early

stages, but will offer some further differentiation for the brand in regards to offering producers additional feedback.

3.1.4.2 Future recommendations

In future the Gundagai Lamb brand will explore the need for a more wholistic farm assurance program that is formalised, beyond the current raising claims used. Additionally, further work is ongoing to differentiate the brand in the marketplace in relation to information provided to the consumer, educating the consumer on a wider range of the supply chain including producer engagements, and ensuring that any new carcase measurements are undertaken to solidifying the consumer experience (such as MSA grading or carcases, and eye muscle area for consistency).

4. Value of project for industry

This section will cover the value of project to industry, in relation to the different ways that value has been lifted

Table 1. Value of project in relation to product value uplift.

Product Description	Projected % of Enterprise Turnover	FY24 Results	Comments	FY25 Forecast	Comments
Sales of GLQ5+ premium lamb within the marketplace	10%	26% volume sold as high-quality product within Gundagai Lamb	We measure the percentage of product that is sold as high-quality product within the Gundagai Lamb brand. This fluctuates over the season depending on the amount of product that is coming through the plant.	32%	A growth of 6% over the next 12 months has been forecast, but will be dependent on how sales perform, and percentage of lamb graded as GLQ5+
Sales of free range, antibiotic free, and growth promotant free	5%	There is an uplift in price for raising claims product of 20%, however, this is not over the entire carcase.	This is measured over time, usually the pricing that we received is for different products.	10%	The expansion of use of raising claims is currently being planned to cover a wider range of product.

Table 2. Systems that have been implemented within the Gundagai Lamb supply chain.

System Implemented	Description / Details
Value-Based Marketing Grid	A value-based marketing grid has been implemented within the Gundagai Lamb supply chain, with the use of a Gundagai Lamb quality bonus applied, based on the grading of the carcases.
Producer feedback portal	Feedback is given to producers via a feedback portal.
Free range, antibiotic free, growth promotant free program	Uplift in sales price has allowed the brand to continue to offer market competitive pricing to producers.

5. Conclusion

A range of work was undertaken, from carcase optimisation and sortation work with the ALMTech project, to investigation into the integration into embedding MSA into GMP systems, the manual production of MSA cut / cook information, producer engagement activities, changes made to value based marketing within the Gundagai Lamb supply chain, and brand enhancements such as the sale of product in a premium line, and development of a raising claims program. This project was able to deliver value back to the industry and importantly back to producers through the implementation of a value-based marketing program within the Gundagai Lamb supply chain and provided support for a staff member to undertake a range of work and attend valuable professional development opportunities through the MLA Co-Innovation Manager program, an invaluable experience.

5.1 Key findings

- Carcase optimisation is a valuable strategy to use within a processing plant when objective carcase measurement technology has been installed, however, there are a range of real-world challenges that can result in issues with this approach.
- Embedding MSA into plant systems is valuable in ensuring that high-end product is meeting consumer expectation, however, gaining adequate funding to embed into plant systems can be challenging.
- When releasing a value-based marketing program, changes may be required along the way to the grid structure, especially when implementing in the early stages of technology release. A well thought out change management plan is required to ensure communication with the supply chain is successful, and change is not disruptive.
- The development of raising claims programs can be beneficial to a brand that is new to market, giving product an edge over other products without these claims, however, it must be noted that some raising claims can be seasonal (for example free range) presenting continuity of supply issues within a supply chain.
- There are many ways to differentiate a brand along the supply chain. Finding a way to market this differentiation is extremely important when implementing within a supply chain. For example, eye muscle area measurements provide the producer with further

feedback on the quality of carcases they are producing, and pressure on this selection criteria to ensure that the consumer is receiving high quality products every time.

5.2 Benefits to industry

The implementation of a value-based marketing approach within a supply chain can provide benefits to all of the supply chain. Producers can gain value by being paid on what they are producing, having clearer market indicators for their brand on what they should be producing, receiving more meaningful feedback, and producing higher quality Australian lamb products.

The consumer benefits by having access to more consistent product quality and therefore an increased confidence in the quality of Australian lamb. If the whole of industry was to move to a value-based marketing system (as initially flagged back in 2019 – see below Farmonline article feature in GMP and value based pricing), there would be a significant uplift in demand of Australian lamb products domestically and internationally regarding consumer preference, and value of product to the Australian producer. The uptake of objective carcase measurement technology is needed in the wider industry to make this a reality and ensure the Australian lamb industry is lifting its value to the Australian economy.

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Value-based pricing will transform lamb industry says processor

By Vernon Graham
Updated December 12 2019 - 5:12pm, first published 10:00am

REARING TO GO: Will Barton, CEO of Gundagai Meat Processors, and lamb floor manager, Jason Crane, with the plant's DEXA unit which measures lean carcase yield.

One of Australia's most innovative sheep processors says the lamb industry will be "unrecognisable" within five years.

6. Appendix 1

Table 1. Triple bottom line analysis table.

KPI	Result
Financial	
Percentage of sales attribute to new high value products developed as part of the innovation program **(measured 6 monthly).**	This has been estimated as 27% given the investment in producer engagement, travel to the US for product sales, and ongoing support. The addition of raising claim status product has been included this quarter.
Volume of the product being sold as high value **(measured 6 monthly).**	26%
Value of applying a quality premium in value-based grid **(measured 12 monthly).**	Currently $0.80 per kg for lambs reaching over GLQ score of 5.
Value of producer engagement **(measured 12 monthly).**	Gundagai Lamb has experienced an 8% uplift in GLQ5+ product over the past 12 months, when comparing January months (the hardest month for GLQ5+ product in the year). This has been attributed to better producer engagement, understanding our producers more and encouraging them to consign when we know they will perform, and producer education in f objective carcase measurement. There will likely be a seasonal factor occurring also.
Value of applying cost of fat through value-based grid **(measured 12 monthly).**	Value-based on first 12 months of trade resulted in Gundagai Lamb paying 7% less for lambs with a lower lean percentage.
Social	
Improved willingness to innovate and/or reduced timelines to innovation adoption **(measured 12 monthly).**	Grid compliance for Gundagai Lamb increased. 87% of lambs fall within the 50-57% LMY category, whilst 96% of lambs fall between 18-32kg. This is an increase of 9% for LMY, whilst hot standard carcase weight remained steady.
% change in the time it takes new products to get to market **(measured 6 monthly).**	In relation to growing the sales of GLQ5+ product, it is anticipated that the increasing sales of this product can take some time. Sales have continued to increase over the past 6 months for high quality product, the uptake of raising claim product has been immediate.
Demonstrate evidence of accelerated innovation adoption aligned with MLA strategic Plan 2025 focus areas **(measured 6 monthly).**	**Our people** Gundagai Lamb sponsored ICMJ and supports three staff members to be on the ICMJ committee. The Gundagai Lamb team undertakes professional development activities and attends meetings and conferences where appropriate. **Our customers, consumers, and communities** Gundagai Lamb is continually undertaking engagement with our customers. A new GLQ5+ Account Manager has been employed in the

	current quarter to increase the sales of GLQ5+ produce, find new markets, and develop relationships with chefs, restaurants, and distributors of our product. Work within the community includes GMP site visits for local medical students to learn more about the potential for soft tissue and muscular injuries that workers may incur when working in a processing plant. **Our livestock** Gundagai Lamb takes animal welfare seriously and we undertake one to one engagement with producers on an as need basis in relation to any issues that may arise. Gundagai Lamb is continually engaging with producers through on plant tours, making GMP available to producers wanting to follow their lambs through the plant, working with research groups needing to slaughter research lambs, and working with producers navigating their feedback and the producer portal. **Our environment** Gundagai Lamb releases information to producers in relation to the amount of water and electricity used to process each carcase. This provides producers with an additional layer of transparency and ensures accountability from a sustainability point of view. Gundagai Lamb has now partnered with Ruminanti to help producers baseline their carbon on farm. We are continuing to work with Ruminati to support producers through this process. **Our markets** With the division of Gundagai Lamb product between GLQ5+ and graded product, it is the vision of Gundagai Lamb that grid pricing and bonus structure will be able to increase over time with a greater proportion of product being sold as premium, attracting premium pricing in the marketplace. The economic resilience of the Gundagai Lamb brand will be ensured in doing this, and producers will be able to access greater economic stability. With the employment of a GLQ5+ Account Manager, this will continue to grow. **Our systems** Gundagai Lamb is built on trust and transparency with our producers and customers. Gundagai Lamb is currently finishing the validation of the panel reader installed

	through an AMIC / AMPC project. Further work is currently being undertaken in the area of eNVD's within Gundagai Lamb. This includes raising awareness of the availability of eNVD's, also the possibility of incorporating eNVD's into the Trust Provenance Traceability application. Trials are ongoing with Gundagai Lamb producers to test and use the eNVD app supplied by ISC. Use of Triton systems is continuing, with the integration of MSA into the plant's systems.
% of innovation concepts that are successfully adopted / launched **(measured 12 monthly).**	The wider use of EID tags has been ongoing with producers requesting the scanning of tags. The Pioneer's Program is ongoing, with further producer engagement occurring. A new MDC project has been approved to increase the amount of work undertaken at GMP in the MSA, and producer engagement space.
Attendance at MLA's network events **(measured 12 monthly).**	Regular attendance at the MLA Co-Innovation workshops and network events
Co-Innovation manager completes MLA's capability development program **(measured 12 monthly).**	MLA Co-Innovation capability development program completion.
Environmental	
The number of new sustainability initiatives undertaken or the inclusion of sustainability considerations in projects undertaken as part of the agreement **(measured 12 monthly).**	Gundagai Lamb are currently considering how to include sustainability measures for producers. The new partnership with Ruminati will allow producers to baseline their carbon on farm for no fee with the ability to pay for further advice in relation to measures for improvement. The traceability app will also allow for more information flow between consumers and producers to increase sustainability.
The provision of accurate animal health feedback and support to reduce the incidence of disease and defects and therefore the amount of feed used to grow compromised lambs to a higher carcase weight **(measured 12 monthly).**	Given Gundagai Lamb is continuing to improve the collection of animal health data, the difference over time of the recording of this data in the first 12 months of trading would not be accurate and therefore has not been measured. However, this is a continual goal to improve upon.
Provision of plant water and electricity usage to producers via the Gundagai Lamb producer portal as an incentive to Gundagai Meat Processors to reduce water and power usage **(measured 12 monthly).**	Baseline water use is currently 139.0 L / carcase. Baseline electricity use is currently 5.9 kWh / carcase.