



Final report

Goat levy, industry and producer performance indicators

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Abstract

Project B.GOA.1903 was conducted to inform industry of progress towards the Meat Industry Strategic Plan (MISP) 2020 and the Goat Industry Strategic Plan 2020 against a 2015/16 baseline. It also aims to better understand and articulate the profitability of the goat meat industry.

The methodology for the financial and production performance assessment conducted in this project was to develop a data collection template specific to goat enterprises. The next step was to engage and recruit goat producers to the program by demonstrating and selling the benefits of involvement and finally delivering a comparative analysis report demonstrating the value of the comparative data to their business operations.

On average, rangelands goat production has been more profitable than beef and lamb production in Southern Australia but not as profitable as wool production over the period from 2016 to 2020. Goat production in the higher rainfall zones has not been profitable primarily because it is treated as a hobby. In the higher rainfall zones labour costs exceed income and are 3 times higher than in rangelands enterprises.

These results, demonstrating strong financial performance in goat enterprises, should be used to identify opportunities for investments into research, development and extension.

Executive summary

Background

The results from this project will inform progress towards, and success in meeting, the goals within the MISP 2020 and Goat Industry Strategic Plan 2020 against a 15/16 data baseline. This project will also ensure that potential profitability of the industry is better understood and more widely communicated. The results of this project will inform industry of the performance of goat producers at a farm level which will assist in better guiding investments in goat production research, development and extension.

Objectives

- Deliver data linked to total factor productivity targets for industry – achieved
- Industry situational analysis – delivered
- Implementation of comparative analysis program with a minimum of 40% of participating producers demonstrating their intent to change – achieved.

Methodology

A data collection template using industry-accepted methodology specific to goat enterprises was developed to conduct the financial and production performance assessment. Goat producers were engaged and recruited to the program by demonstrating and selling the benefits of involvement. A comparative analysis report was delivered to participating producers. Analysis of aggregated data was conducted to identify the features of the more profitable goat producers.

Results/key findings

The key finding from this study is that rangeland goat enterprises, regardless of management system, have been as profitable or more so than the more mainstream livestock enterprises which include lamb, beef and wool. While the data set of comparative livestock enterprises was not exactly like for like it did allow for comparison. Comparative data suggests goat enterprise profits had greater volatility than all enterprises, but they generated higher average profits in the poor years than beef.

Benefits to industry

This project has delivered the first industry representation of financial and production performance of goat enterprises at the farm level. It has allowed for a comparative analysis against other livestock enterprises competing for the same resources. It has identified the features of the most profitable goat enterprise managers which has allowed for the setting of production and financial targets supported with evidence.

Most of the goat producers who have contributed to the data set had never been exposed to farm financial and production performance analysis previously. This project has given them the opportunity to build financial and farm management skills through their performance assessment and the comparative analysis.

Future research and recommendations

Production data recorded in most rangeland goat herds is currently limited to kilograms of goat meat sold and total goat numbers. In many cases, due to the nature of the production system, goat

numbers are best estimates not actual counts. Improved methods for calculating goat numbers managed on farm, annual changes in numbers and meat production per head could provide valuable data but it needs to be collected in a labour efficient (low cost) manner. This is an area where remote walk over weighing and other technology is likely to add value.

The collection of production data from a range of sentinel rangelands goat enterprises with open source data would be a useful starting point. The greatest improvements in the medium to high rainfall zones will come from improvements in labour efficiency. Improving business management and financial literacy skills in both zones should be a key industry focus.

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1. Background

This project B.GOA.1903 was established to generate a system of transparent and robust indicators to assist in gauging the effectiveness of investment of goat levy dollars in the industry and the development and performance of the industry over time.

Expected outcomes include:

- Results inform progress towards and success in meeting the goals within the MISP 2020 and Goat Industry Strategic Plan 2020 against a 15/16 data baseline.
- Producers involved better understand their own cost of production either via involvement in this program or through recruitment into products like Business EDGE.
- Potential profitability of the industry is better understood and more widely communicated.

2. Objectives

This project will generate a system of transparent and robust indicators to assist in gauging the effectiveness of investment of goat levy dollars in the industry and the development and performance of the industry over time.

Expected outcomes include:

Expected outcome 1. Results inform progress towards and success in meeting the goals within the MISP 2020 and Goat Industry Strategic Plan 2020 against a 15/16 data baseline.

Expected outcome 1 has been achieved. The results of the situation analysis show the aggregated performance of goat producers in the rangelands and the medium to high rainfall zone. The results show profitability of goat producers over time and relative to other enterprises.

Expected outcome 2. Producers involved better understand their own cost of production either via involvement in this program or through recruitment into products like Business EDGE.

Expected outcome 2 has been achieved. Producers involved in this project have built financial literacy and an understanding of the production of their business. Most producers involved had never conducted a production and financial performance assessment in their business before. They now have up to a five year record of their performance outlining performance indicators not only including cost of production but many other productivity measures.

Expected outcome 3. Potential profitability of the industry is better understood and more widely communicated.

Expected outcome 3 has been achieved. The goat industry situation analysis has clearly articulated the profitability of goat producers involved in this project. It has aggregated the data and reported the level of profitability as a whole and has compared the profitability with other enterprises from a respected industry source (Holmes Sackett). Profitability of different comparison groups including the most profitable have also been included.

The number of participants in the high rainfall zone was low however the results were consistent with a previous goat project (B.GOA.0077) showing poor profitability due to high labour costs at an aggregate level.

3. Methodology

3.1 Data collection template development

A data collection template was produced using industry accepted methodology was used to collect goat enterprise financial and production performance data (benchmarking). As profitability was one of the key data outputs it was necessary to collect whole farm data in addition to enterprise level information. Allocation of resources to the goat enterprise was conducted on a per DSE pro rata basis thus it was necessary to collect inventory data from livestock enterprises in addition to the goat enterprise. A document articulating the methodology used to calculate the outputs delivered in the financial and production performance assessment is appended to this report (Appendix 2).

3.2 Recruitment

A goat producer recruitment campaign was conducted upon contracts being signed. This included:

1. Collating names of producers, industry representatives, extension agents, service industry representatives, and goat producer champions.
2. Development of a value proposition. The aim of this document was to identify to the project team the value to goat producers of being involved in the project. This provided the team with the ability to sell those benefits with confidence. The value proposition is attached.
3. Cold phone calls and referral phone calls to goat producers, extension agents, goat industry champions and industry representatives. All goat producers who committed to contributing data to the project were happy to provide additional contacts of other producers who may have been keen to be involved.
4. Those producers who agreed to receiving more information were immediately emailed with details about the project and the benefits of being involved. A follow up phone call was made to those producers who agreed to receiving more information.
5. An email campaign conducted in parallel with phone calls so that each contact was aware of the project, the aims and the benefits of being involved prior to being contacted on the phone.
6. A media campaign including media releases, engagement with ABC local radio, engagement with Sheep Central and others was delivered to assist with recruitment.
7. A social media campaign including recruitment messages was launched on Twitter and Facebook. These articles were shared by a number of industry representatives.
8. Team members delivered a presentation at the GIRDC committee meeting with a request for recruitment from members.
9. John Francis delivered, with Julie Petty as the moderator, a recruitment webinar on what benchmarking is, what the project is and what the benefits of being involved are.
10. MLA have conducted several of their own recruitment campaigns encouraging involvement from goat producer levy payers.

Recruitment results were disappointing with extremely low willingness to be involved from any western NSW rangeland goat producers. Even those who are considered to be the largest advocates of the enterprise and the industry were not been willing to commit. The drought played a role in the lack of uptake but there were a range of other factors contributing to the poor engagement. These are outlined at 4.3 Recruitment and Engagement.

Each goat producer who was been involved in the project has been provided an individual report showing each year of performance on a gross level and on a per DSE level. A comparative analysis of

individual goat enterprise performance against the data set average and top 20 percent has also been compiled and included in the report to participants.

3.3 Reporting and analysis

All individual goat enterprise data was reported in a data set for analysis. All participants were provided with a summary report showing their individual financial and production performance and how it compared to the aggregated data set. The outputs of the analysis and the aggregated data are all shown in the Situation analysis shown at Appendix 1 of this report.

4. Results

4.1 Situation analysis

The outputs of the Situational analysis shown at Appendix 2 of this report. The key points from the executive summary of that report are shown following.

- Average profit (EBIT) of Rangeland goat meat enterprises from 2016 and 2020 equate to \$20 per dry sheep equivalent (DSE).
- This level of profit resulted in average goat enterprise operating returns of 5.4 percent over the five year period from 2016 to 2020.
- Goat meat enterprises in the medium to high rainfall zone (MHRZ) have generated large losses. This weighted the average of all goat producers down to \$11 per DSE.
- A plausible explanation for the difference between Rangelands and MHRZ goat meat production is that Rangelands goat enterprises are treated as a business while goats in the medium to high rainfall zone are treated more as a hobby.
- Labour costs and scale are a key issue in the MHRZ. Labour costs per DSE in MHRZ goat production is five times higher than labour costs in Rangeland systems.
- Reasonable seasonal conditions were experienced for two (16-17) of the five years benchmarked for most goat producers while poor seasonal conditions were a feature over the three year period 2018-2020.
- While the methodology is not exactly like-for-like, comparisons between enterprises show that rangeland goat meat enterprises are competitive with other livestock enterprises including lamb, beef and wool.
- The highest profit/EBIT goat meat producers all come from the Rangelands and generate double the profit per DSE of the remainder in the Rangelands.
- They do this by generating 8 percent more income from 60 percent less cost.
- The highest profit Rangeland goat producers generate \$36 per DSE in profit (EBIT) from a cost base of approximately \$25 per DSE and income of \$61 per DSE.
- There is more than one pathway to high profits in goat meat production. Some high profit goat producers derive more profit through more income per DSE and a reasonably high cost structure while others achieve it by driving an exceptionally low cost structure.
- Goat enterprises had far greater volatility in returns but the upside of the volatility in profits was greater than any other enterprise and the downside was better than beef.
- The effects of the drought have induced significant volatility but the average minimum profit over the had a lower financial impact on goat meat enterprises relative to other enterprises.

- Cost of production has increased significantly but this has been driven primarily by lower production related to drought.
- There is a huge range in labour efficiency between goat herds with the best achieving around 20,000 DSE per labour unit.
- Improved data collection and record keeping, systems development, genetic gain and labour efficiency represent areas of opportunity for improvement in efficiency.

4.2 Group presentations/extension

One key project deliverable was five producer group presentations completed (see table following). So far, eight presentations have been delivered and it is anticipated once the findings of the situational analysis are published that greater exposure and extension of these results will be required.

Date	Presentations	Theme/topic/website	Location
15-Apr-19	How to benchmark your goat enterprise	What goat benchmarking is	Webinar
2-Oct-19	The numbers behind the goat industry	Goat industry development day	Ipswich
1-Aug-19	Goat benchmarking results - what have we learnt?	Goat industry development day	Cunnamulla
2-Aug-19	Setting the livestock strategy - benchmarking lessons	Enterprise comparisons	St George
15-Aug-19	Give your goat business the EDGE in management	MLA Victorian goat roadshow	Ballarat
12-Sep-19	Production & Financial performance in rangeland goats	MLA webinar series	Webinar
15-Oct-20	Rangeland goat production and financial performance	Goat industry development day	Cunnamulla
25-Nov-20	Rangeland goat production and financial performance	Industry awareness	Western LLS

The project required the development of case studies suited to Business EDGE plus 10 proof of profit case studies delivered for publication in MLA feedback. Both of these deliverables have been achieved and the outputs can be found at Appendix 3 and 4 of this report. Following are links to those case studies which have already been published by MLA.

Producers willing to be used as case studies were keen for locality data and specific information on their business to be excluded. These producers considered that the less specific the information, the lower the risk of potential for theft and activism. A key recommendation is for MLA to deliver only general rather than specific information about some aspects of the case study businesses.

<https://www.mla.com.au/news-and-events/industry-news/benefits-beyond-weed-control/>

<https://www.farmonline.com.au/story/6826848/goats-work-wonders-as-additional-income-stream/>

<https://www.mla.com.au/news-and-events/industry-news/growth-weight-data-providing-valuable-insights/>

<https://www.mla.com.au/news-and-events/industry-news/labour-saving-strategies/>

4.3 Recruitment and engagement targets.

The project set aggressive recruitment and engagement targets of having 60 goat enterprise producers contributing their own goat enterprise production and financial performance data. This target was not achieved with only 32 goat producers in total contributing to the data pool. Not all producers contribute to all years.

This occurs for a range of reasons including:

1. Producers exited the industry between years
2. Producers recruited were new entrants to the industry and had fewer than five years data
3. Producers changed enterprises between years to the exclusion of goats
4. Producer expectations of results from stage 1 did not reconcile with their view of performance.

The general lack of commitment by goat producers to deliver their data to the project was disappointing and unexpected, particularly given that little investment was required on the part of the producers. The reasons provided for not wanting to be involved include producers being too busy, no interest in the outcome, no time due to drought, concerns about data security and management and concerns about exposing their own business performance. The value proposition identified ways of dealing with each of these issues but the sentiment for many was clear. It is possible that there are underlying issues that we have not been informed about that are additional reasons for a lack of desire for involvement.

Many producers had heard about the project prior to researchers being in contact and some had discussed the project with their neighbours. It would appear that some had decided not to be involved on the advice of neighbours who had influence. Any uptake in Western NSW was low and even the biggest advocate pulled involvement at the last minute. The drought in Western NSW has definitely played a role, with phone discussions showing that mental resilience was at a low for many producers contacted. Having said this, some Western NSW producers who were involved, had very good financial performance given the circumstances and were upbeat about the industry in general.

It is hard to know how to help some goat producers when an opportunity to learn masses about their business performance, that costs them nothing more than a small amount of their time, is foregone.

Sentiment in Queensland was very different, with many producers keen to understand their goat enterprise performance and know how they compared with others. Referrals in Queensland were an excellent means of getting to producers, with each additional participant contributing another willing participant. Many producers contacted in Queensland were new entrants to the industry so didn't yet have data to contribute but were very interested in the project findings. Considerable investment has been made in exclusion fencing in that area and many consider that goats are an enterprise, well suited to their resource base, which will deliver solid returns on their investment.

One producer leveraged the information, delivered in the benchmarking reports, to demonstrate the year-on-year profitability of their business with their financier. In the re-financing process, they achieved a lower cost of funds delivering value of approximately \$25,000 per annum. This

demonstrates the extent to which delivery of well-articulated and easily interpreted information can add value beyond the learnings of the data itself.

This example provides an idea of the extent of the opportunity that can be delivered by investing in financial literacy and understanding the financial and production performance of the business.

5. Key findings

5.1 Findings from the situation analysis

- Rangeland goat enterprises are competitive with other typical livestock enterprises competing for the same resource use.
- It is possible to have an efficient and profitable goat enterprise in the medium to high rainfall zone, but the enterprise must be treated as a business not as a hobby. The financial performance of goat enterprises in the medium to high rainfall zones is constrained by poor labour productivity.
- Labour efficiency and labour cost is also the number one driver of difference in profit between the high profit group and the remainder in the rangelands. Labour and labour related costs of the highest profit rangeland goat producers were half that of the remaining rangeland producers.
- Rangeland goats may have a competitive advantage over beef enterprises managed in the Rangelands because the aggregated data suggests the financial impacts of the drought on goat enterprises were lower than in beef enterprises.
- Rangeland goat enterprises may have a competitive advantage over lamb produced in the rangelands because the market accepts a lower weight for processing than does lamb and goat meat producers have a lower cost of production than lamb producers.
- Average operating returns (return on assets managed) of goat meat enterprises in the Rangelands have been very high. High prices have contributed to this result.
- At the same profit (EBIT) financial resource efficiency should be higher in the rangelands than in the higher rainfall zones due to lower land values per livestock unit.

5.2 Findings from producer interaction

Research data to support objective, rational and economically based decisions in goat enterprises is scant. Producers who have been managing or harvesting goats over a reasonable period have generated a wealth of practical knowledge through their observations and management of the resource. They have insights into social behaviour, genetic differences between types, production performance, reproductive behaviour and grazing habits and preferences. Many of these producers have generated productivity benefits and built enterprise specific management skills through their own investment in research and development, though they wouldn't refer to it as such.

Some of these insights are captured in case studies but there is further opportunity to extend the practical skills of these producers to assist new entrants to the industry deliver improved management from the outset.

For example, producers have relayed experiences where large weight losses were experienced in trading goats prior to sale over a short time where logistical issues required the relocation of

goats prior to trucking. Similarly, there was commentary that the movement of nannies between paddocks could induce production losses. The quantification of some of the losses associated with what appears to be social or territorial behaviour could potentially deliver beneficial and practical management strategies around goat movements.

Price is not a key factor constraining the uptake of farm business performance analysis. This project provided enterprise performance analysis for free and made the data collection process as easy and efficient as possible by having a consultant go to the farm to collect the data and still had low uptake. Given that such performance analysis is an important component of improving financial literacy and better understanding and increasing productivity and profitability, it demonstrates some of the broader attitudinal challenges faced by the industry.

The completion of large scale exclusion fencing projects or clusters in Queensland has coincided with solid sheep meat, wool and goat meat commodity pricing. The combination of these improved prices and the newfound ability to manage sheep and goat enterprises without the production losses associated with wild dogs has resulted in greater competition for resources between livestock enterprises. The lower labour requirement for goats relative to sheep, due to a lack of requirement for shearing and the less frequent handling is appealing to some managers, particularly where accessing labour is already a challenge.

Some producers believe that the language and messaging around Rangeland goats has done little to promote the enterprise as a prosperous and profitable contributor to the red meat industry. Often terminology and wording such as “feral”, “pest”, “wild”, and “destructive” is used when referring to Rangeland goats. This is similar to the marketing or perception issue that was faced by the lamb industry where there was a push to move messaging and language from the commonly used term “fat lambs” to “prime lambs” due to the negative connotations associated with the former.

A constructive approach requires industry to lead with consistency in positive language substitution and messaging. For example, Rangeland goats are a resource rather than a pest, they are opportunistically harvested rather than wild harvested, and they are Rangeland goats rather than feral goats. The websites of GICA and MLA show that these organisations appear to be leading by example with positive messaging surrounding Rangeland goats but there is still a way to go to ensure this message is adopted more broadly in the industry.

6. Conclusion and recommendations

6.1 Future research and development

Following are key recommendations for future research and development

1. Quantify the costs and benefits of the introduction of Meat breed genetics into Rangeland goat herds. Establish the ideal cross breeding program for Rangelands herds by management system - Wild harvest (unfenced) semi-managed (fenced and unfenced), managed (fenced).
2. Define, validate and cost the management techniques necessary to delivery success with the introduction of Meat breed genetics into Rangeland goat herds. For example, a common producer recommendation for success involves the removal of all male reproductive aged goats from female reproductive goats prior to the addition of the meat breed males.

3. Establish the costs and benefits (ease of management, greater weaning percentages, different growth rates etc) associated with controlled joining and compare with conventional uncontrolled joining in the rangelands. This will establish whether there is value in a controlled joining approach.
4. Given labour costs were a key driver of difference in profit, establish the components of the systems that are leading to lower costs. Investigate scale, operational tasks and number, features of mustering including type of muster (trap versus general), machinery-used and labour required, capital works differences, nature of the land class, approach to water management and repairs and maintenance.
5. Invest in examining the cost and benefit of technological approaches to labour management in remote areas. Leverage areas of existing investment then extend the results as the uptake and adoption appears to be low currently.
6. Walk over weighing technology has been proven to deliver production data successfully in beef systems in remote areas of Northern Australia. Establish whether there is opportunity to adapt the technology to rangelands goats. Establish whether the potential benefits in data capture exceed the costs in labour to deliver the outcome.

6.2 Practical application of the project's insights and implications to the red meat industry

Following are key recommendations for the practical application of the projects insights and implication to the red meat industry.

1. This project provides the first broad scale assessment of the comparative performance of goat enterprises with other livestock enterprises. Goat enterprises have performed extremely well when compared with alternative livestock enterprises potentially competing for the same land resource. This demonstrates the importance of goats as a valuable resource and industry in the rangelands. These results may influence rangeland producers who have not considered goats as part of the enterprise mix in the past to do so in the future.
A recent survey held during a Webinar extending the results of this project to producers in the Western Local Land Services region of NSW showed 88 percent of producers saw the contribution of goat enterprise income to whole farm income increasing over the next five years. This suggests a shift is already gaining momentum.
2. Improved messaging to goat producers in the medium to high rainfall zone to ensure that they take a more efficient and business-like approach to the management of their goat enterprises to improve profitability.
3. Clarity around the key area of business improvement for goat producers in the Rangelands to improve profitability. Rangeland goat producers will know that labour is a specific area of the business where improvements will deliver improved profitability and productivity.
4. The industry now has better and more objective information upon which to target policy and investment in Research and Development.

6.3 Development and adoption activities which would ensure the red meat industry achieves full value from the project's findings.

Following are key recommendations for Development and adoption activities which will ensure the red meat industry achieves full value from the project's findings.

1. Awareness activities increasing the exposure of the solid performance of Rangeland goat enterprises relative to other livestock enterprises.
2. Media package development highlighting the exceptional financial performance of Rangeland goat enterprises and delivering messages that there are multiple pathways to successful and profitable outcomes in goat production.
3. A supported learning package delivering practical goat production techniques with a focus on maximising production has already been developed. This will be a great way to build practical production and management skills in goat enterprises.
4. Continued investment in farm financial literacy will be critical. The skills delivered in this area are complementary to the production skills and add value by linking production measures with financial performance. This aids in the development of critical thinking and objective decision making which typically deliver improved business performance.
5. The development of extension activities specifically focussed on assessment of labour cost, labour productivity and investment analysis into infrastructure and technology that will deliver labour efficiency improvements.
6. Consistent positive language and messaging during extension activities and media campaigns to showcase how Rangeland goats are a resource that contribute in a productive and profitable way to the red meat industry.

7. Appendix

Appendix 1. Situation analysis

Appendix 2. Methodology used to calculate the outputs delivered in the financial and production performance assessment

Appendix 3. Business Edge case studies

Appendix 4. Ten proof of profit case studies

Appendix 5. Findings summary – PowerPoint presentation